

BUSINESS WEEK

SEPT. 14, 1946

TECHNOLOGY D

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Question to Vice Admiral Bowen: What does the "militarization" of research mean to industry? (Special Report, p. 19)

BUSINESS
WEEK
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The goose that lays the golden eggs is beginning to realize she is a goose

WHO created 50 million jobs in America? Who paid wages so high that the poorest workman could afford luxuries even the rich in other countries never had? Who paid for the research to develop new postwar products which *could* be providing greater prosperity than the world ever saw?

American industry—spurred on by the chance for profit.

It has paid more taxes, provided more jobs, paid higher wages, produced more goods at lower prices, developed more national security than any other system in any other time in any other part of the world.

Now this great force which has done all this for America is being treated by elements of government and labor as though it were an enemy. Industry is told what it must pay but government wants to decide what it can charge; industry managers who supply the brains to keep all business going are cut back and back in profit and the right to manage; a thousand regulations trip, hamstring and block business progress. The wonder is that American industry and those who own and manage it bother to keep on hoping and working.

It might pay all of us who share in industry's benefits (all 129,999,000 of us) to examine the thousand or so who are trying to kill it. Regardless of their names, the accent is foreign.



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TECHNOLOGY DEPTH

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OIL AND GREASE ABSORBENT



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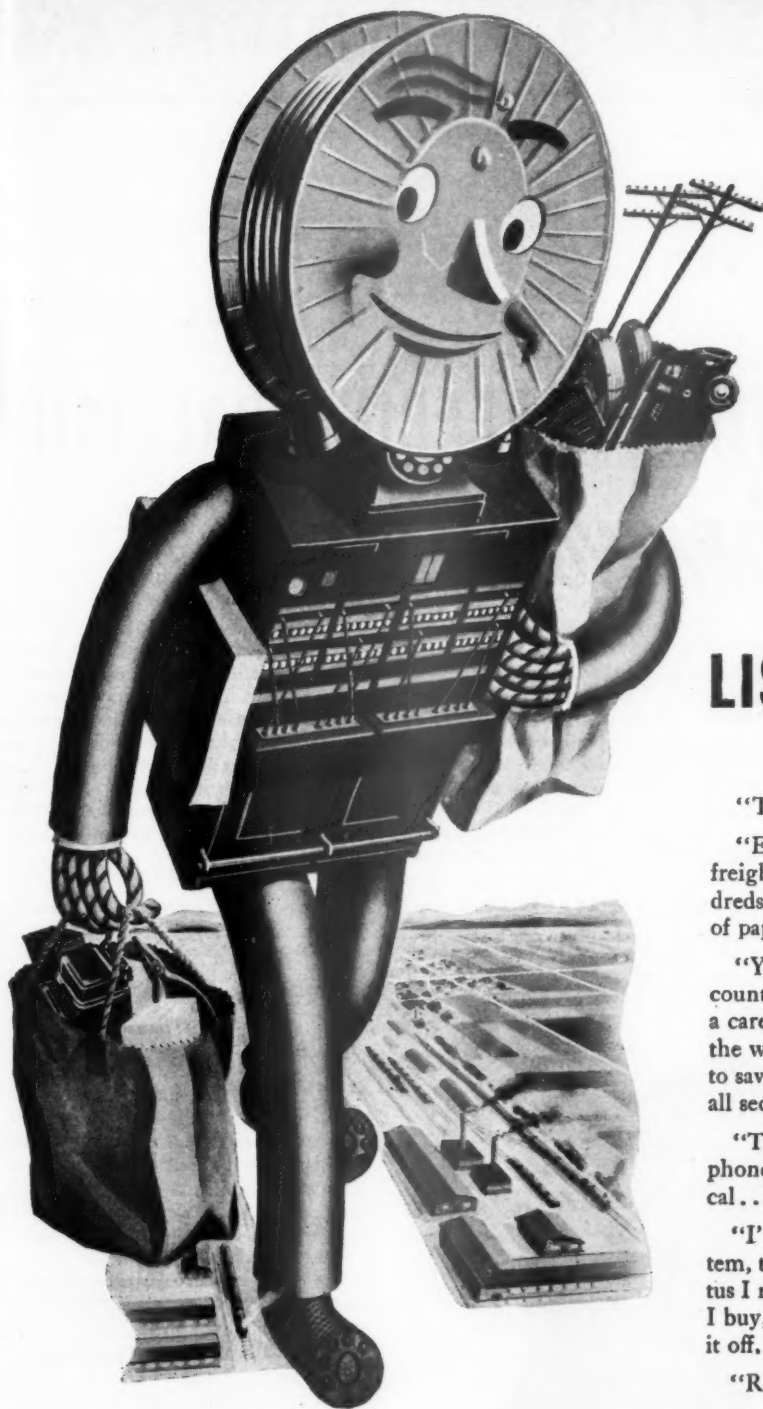
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LISTEN TO THIS!"

"The things I find myself buying!..."

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of supplies of all kinds for telephone companies.

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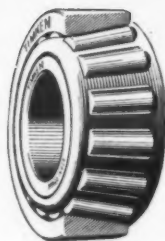
of telephone central office equipment.

FOR THE BELL SYSTEM



Western Electric

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WE SEAL IT—

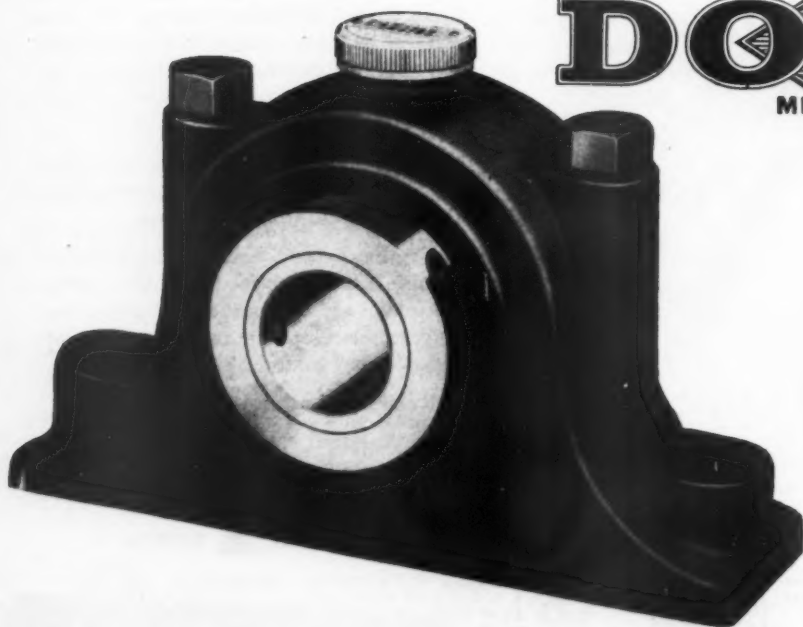


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WASHINGTON BULLETIN

INDUSTRIAL MOBILIZATION

Quietly, behind the scenes, Washington's ideas are beginning to cluster around the theme of industrial mobilization for war. This is portentous for industry.

With reconversion not yet complete, a subtle change in emphasis is occurring; top policy men and men concerned with individual problems are beginning to think in terms of gearing industry for a quick shift back to a war basis—thinking that goes beyond the expected military program to apply the lesson of our unpreparedness for war against the Axis.

The men doing the planning aren't warmongers. They're men who fear that we may blunder into a war, or who think that an organized, quickly available, industrial maintenance for military action may avert the threat of war. Not all of them yet realize the full implications in terms of interference with civilian production, and regimentation of business.

The people with political and social axes to grind have yet to start swarming around this new grindstone. But already it is clear that the preparedness theme will be injected into the future relations between government and business.

Legislative Program Shaping Up

So far, the whole thing is fragmentary, there's no concerted plan. But all over Washington men are converging toward a plan as they work; some of them are starting now to figure out how it can be sold to a public sick of war restrictions.

The idea will come out into the open next spring, when President Truman goes to Congress with preliminary legislation. He will ask money and authority for continued stockpiling of critical materials, for a program of standby munitions plants, for educational munitions contracts to industry. He may ask permanent authorization for a civilian mobilizing-planning agency independent of the Army & Navy Munitions Board—a sort of embryo WPB.

There'll be resistance on Capitol Hill, efforts to keep the operation on a blueprint basis where it can't interfere with business as usual. Already Civilian Production Administration officials are bracing themselves to resist military pressure for immediate stockpiling of industrial materials which are in short supply on the basis of commercial demand alone (BW—Sept. 7 '46, p. 5).

Nelson Advises the President

But failing some unexpected relaxation of international tensions—such as might result from a promising atom-

control treaty—there's little doubt of an eventual congressional go-ahead.

First phase of a mobilization program is an increased schedule of standby capacity—or government-owned war plants to be put in grease. And on plants that will be turned over to industry for commercial use, planners will demand tighter strings to prevent any changes that would interfere with their conversion back to munitions. Ex-WPB boss Donald Nelson is in Washington now advising the President and the services on this job.

Next step would sharpen the application of the standby concept to private plants. Conferences between the government-planning agency and industry groups would go farther than ever before to assign each firm its war role and to multiply educational production contracts for those given unfamiliar roles. Component suppliers would be lined up. Key machinery might be laid in. Some provision might even be made for housing an expanded labor force. The whole vastly expanded plan would be reconsidered every year or so to provide for new weapons and new production methods (failure to do this was the biggest weakness of the Munitions Board's disregarded prewar mobilization plan).

Events Will Decide How Far

The second, more drastic, tremendously more expensive phase would involve reshaping of the patterns of whole industries to cope with war needs and war strains. Decentralization and dispersal of industry, undergrounding of key facilities might come at this stage.

How far these more extreme plans might go depends on the international situation, on the domestic political climate, on the extent to which the mobilization program becomes a device for social and political control, on whether armament production gravitates toward pump-priming if the economy runs into trouble. But it's not impossible to envisage the day when a spokesman for military needs sits in on every major business decision.

STRIKE VS. RATIONING

Government officials are aware that they've got to settle the Hawaiian sugar workers strike (page 113) within a couple of weeks if they want to avoid continuing sugar rationing through 1948—and they've no clear idea how to go about it.

Much of the sugar land is irrigated, and if care of it is neglected too long

the million-ton Hawaiian crop is likely to be halved for two years, since cane takes 22 months to mature. Washington has been optimistic on sugar, on the basis of an extra 500,000 tons expected from Cuba next year, but the impending Hawaiian loss would cancel out this gain.

ADVISERS NOW ADVISING

The OWMR advisory board is sitting closer to top policy-making than it ever has before. The group of big names in industry, labor, and agriculture which was assembled by President Roosevelt almost as an afterthought to his appointment of James F. Byrnes as Director of War Mobilization in 1943—and which used to complain bitterly that nobody talked to it—now is being regularly consulted by President Truman.

Under the chairmanship of public member George Taylor of the old National War Labor Board, the board is gaining a separate identity; it is tending to bypass OWMR Director John Steelman and to talk direct to the President.

The group is valuable to Truman as a bouncing board. Tossing at it new ideas, embryonic policies, he gets back the frank reaction, as individuals, of farm, labor, and industry leaders. In off-the-record sessions, men like William Green of A.F.L., Jim Patton of the Farmers Union, or Eric Johnston, industry spokesman, can react to a projected line of Administration policy without publicly committing themselves or their organizations. It has happened that a member has told the President "Officially I'm going to have to oppose this but . . ."

Need for Cohesive Staff

By giving this important group a sense of participation in the formulation of policy, and a chance to modify it, Truman can sometimes temper opposition, elicit advance support in organizations in which these men have influence.

The advisory board's rise is one evidence of the presidential groping for close staff and advisory support. Under F.D.R., Harold Smith's Budget Bureau came to operate at a policy level, more or less by default. Under Truman, and with Smith gone, the Budget Bureau is slipping back to its ledger books.

This leaves a vacuum which is only partly filled by the board, by the OWMR itself, and by the new Eco-

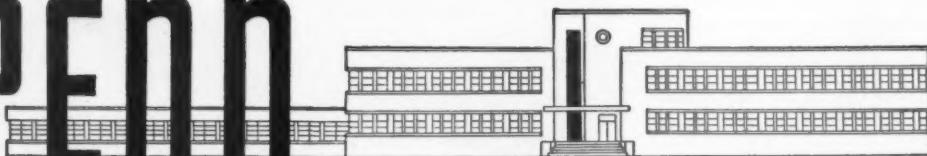


... and still plenty of time to catch the 8:14! But not too long ago it was a far different story. There was that daily battle, firing up the heating plant—and then the inevitable morning rush.

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PENN



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

conomic Council set up under the employment act of 1946. In consequence, there is increasingly widespread belief that this loose assemblage ought to be organized into a permanent and more cohesive White House staff.

ATOMIC ECONOMY

With economy on its mind, the Administration decided not to spend \$30,000,000 or so to find out whether the technicians could predict the results of a deep-water atomic explosion as accurately as they did the results of the first two tests at Bikini. With personnel sure to be tied up for months more investigating the effects of the shallow burst, as the radioactive wreckage cools off enough to permit approach, the Navy was rather appalled by the diffi-

culties of a test on a fleet which couldn't be anchored and where sunken ships would be irrecoverable.

Theoretical calculation of the effects, of course, is easier in the deep-water case, since the bomb is surrounded by a homogeneous medium of known properties. But no one has even disclosed whether the better transmission of blast pressure through water would counterbalance the energy lost in heating up the ocean to make the biggest steam bubble ever seen.

A CRY FOR ALUMINUM

CPA is pressuring Housing Administrator Wyatt to subsidize importation of Canadian aluminum for use in roofing, siding, and prefabricated panels. With the Canadian price at 12¢ a lb.,

the 3¢ tariff makes imported metal cost a cent more than domestic.

Confounding all wartime expectations, an insatiable aluminum demand is crowding against ingot production capacity. Five of the war-built plants—with a total capacity of some 800,000,000 lb. a year—are now out of operation because there's no cheap power where they're located. By next month, when Henry J. Kaiser brings in his last two pot lines at Spokane, ingot production will be running at more than 100,000,000 lb. a month. No additional supply is in sight except by imports. Aluminum is tight in Canada, at the moment, because of a strike, but as soon as that's settled the huge capacity of Aluminum Limited's many subsidiaries should be able to help.

U. S. rolling mills, too, are strained by the demand, but CPA thinks they

Federal Bureaus Spell Out Their Procedures

Obedient to the behest of Congress, federal bureaucracy revealed in print this week how it does business. In the Federal Register of Sept. 11, the Cabinet departments and independent commissions and agencies described their organizations and procedures in formidable detail, the first step required by the new Administrative Procedure Act.

• **Important to Business**—Preparation of the information that they were required to file has had government lawyers sweating, some of them cursing, for three months. This time the shoe was on the government's foot, but the report that its lawyers have finally come out with is of vital importance to all industry executives and attorneys, any phase of whose business is subject to any federal government regulations or investigation.

Ever since Congress in 1887 created the Interstate Commerce Commission with delegated powers to regulate commerce, the throng of commissions and agencies which has followed has been as busily making laws as has Congress itself. These have come to be known as administrative law: administrative, because it involves the exercise of legislative and judicial powers by officials who are neither congressmen nor judges; law, because what these officials require is binding upon all persons to whom their regulations and orders are directed.

• **A Unanimous Vote**—Umbrage against bureaucrats' steadily increasing authority boiled over in the early years of the New Deal with the mushrooming of new agencies whose conduct was particularly offensive because it was inspired by a crusade for socio-economic reforms, and often slighted administrative practices.

So the law "to improve the administration of justice by prescribing fair administrative procedure," which Congress passed without a dissenting vote and President Truman approved June 11, might be called a law to "curb your bureaucrat."

• **Must Be Published**—The new law tackles the disciplining of bureaucracy from three angles: public information, administrative operation, and judicial review.

Government agencies are required to publish full information regarding their authority and organization, and their methods and rules of procedure. It is this information that was published in the Federal Register this week. The information requirement is enforced by a provision that no person can be bound to any procedure not so published.

The law lays down rules for rule-making, hearings, appeals, etc., and defines the limitations on administrative authority.

New rules may not become effective on less than 30 days' notice, except in unusual circumstances. The

law's provisions with respect to judicial review are intended to afford a remedy to any person suffering legal wrong because of agency action, and define the right, mechanics, and scope of judicial review.

• **Better or Worse?**—Partially to meet the criticism that the personnel of a government agency frequently acts both as prosecutor and as judge, the law sets up a quasi-independent corps of trial examiners under the civil service system to preside at agency hearings.

Reaction to the new law varies with the point of view. Some attorneys practicing before government agencies share the opinion of government lawyers that the law will tie exercise of the government's regulatory functions in a strait jacket to the disadvantage of those who are being regulated.

There will be confusion for a time, in any case. Certain provisions of the law itself will call for court interpretation. Leaders of the bar are generally hopeful, that, in the long run, this overhauling of government administrative machinery will tend to reduce friction in government-business relations.

Lawyers are prone to look at the problem from a technical viewpoint. Businessmen may wonder whether improvement in the efficiency of government regulation doesn't simply lay a firmer foundation for more regulation.

THE ABC's OF SALES SUCCESS

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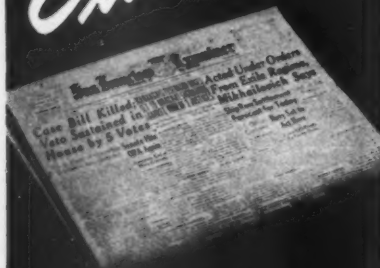
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THE SAN FRANCISCO

Examiner



NEWSPAPER NUMBER ONE

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could handle additional tonnage if Wyatt will do something about standardizing housing sheet to permit long runs at the mills.

CAPITAL GAINS (AND LOSSES)

The War Assets Administration doesn't want to shoulder sole responsibility for deciding who gets the Big Inch and Little Big Inch oil pipelines. Administrator Littlejohn is setting up an interdepartmental board to tell it which if any of the bids received last month should be accepted (BW—Aug. 10'46,p19).

Government economists and statisticians in the middle (\$5,000-\$8,000) brackets are deserting Washington in droves. Most are going to the booming university economics departments, taking a salary cut for the sake of campus leisure and freer intellectual atmosphere. Some are going to the international organizations, attracted by the tax-free salaries.

Two weeks after issuance of its regulations governing decontrol petitions under the new price law, OPA has still to receive notification of a single industry advisory board meeting which has decontrol on its agenda. Under the regulations, decontrol action must be started by a formal industry meeting preceded by two-weeks' notice.

—Business Week's
Washington Bureau

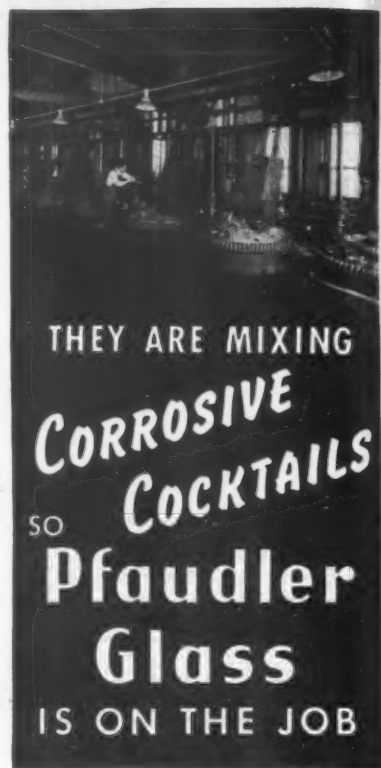
THE COVER

Behind that "question to Vice-Adm. H. G. Bowen" lies the startling postwar fact—until now almost unnoticed outside the academic world—that pure research in the field of science has suddenly become a federal responsibility under military direction.

Adm. Bowen's moves are likely to provide the first answer because the Navy, acting through his Office of Naval Research, was the first to get going on the new program. (But the Army is now jumping in fast and with a big bankroll.)

For the reasons why this "nationalization of science" is important to industry and for what it may offer you in suggestions on product development or on possible markets for equipment, turn to the Special Report to Executives, "Science Dons a Uniform," starting on page 19.

The Pictures—Harris & Ewing—Cover, 117; Acme—15, 16, 19, 44, 50, 64, 67; Int. News—16, 18, 31, 104, 113, 114; U. S. Army—19, 21; Wide World—22, 96; Aviation—48; Underwood & Underwood—56; American Banker—68; European—74; Southern-California Labor Herald—108.



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BUSINESS WEEK • Sept. 14, 1946

THE OUTLOOK

BUSINESS WEEK
SEPT. 14, 1946



The break in the stock market is having a sobering effect. In fact, too much pessimism can easily be generated.

Analysts, seeking the market's trouble, have a tendency to look only at the black side because that matches a Wall Street trend.

This may be a bear market to the chart readers (page 17), but it still doesn't necessarily mean any spill in business (page 120).

•
Cagey investors have been selling for a variety of reasons, most of which have little to do with the rate of business activity.

In short, there are enough doubts overhanging the market (particularly about profits) to persuade an investor that he has much more to lose than to gain by holding on.

Business probably will rock along at a high level. Even so, the profit prospect—which makes stock values—is none too good.

And if business should spill, stocks would really go sour.

•
Prospects for nondurable goods need the closest analysis if there is any fear that business activity is going into a downturn.

Pessimists today have a feeling that some of the soft goods lines are likely to collapse. Production and sales have been very high relative to pre-war levels. Prices possibly are vulnerable.

Then, too, nondurable inventories have risen steadily this year.

Are things beginning to back up? Will production of nondurables decline faster than durables can take up the slack? Isn't it possible that strikes will prevent durables' taking up the slack at all?

If so, national income will be reduced. Then there would be less money to buy durables, braking over-all activity just that much more.

•
Retail dollar volume doesn't show slackening demand for nondurables.

Department store sales last month (adjusted for seasonal variation) set another top in the succession of new highs (page 16).

This is an impressive record, but it is inconclusive. First off, the figures are hard to analyze; prices are up and stores, in addition, have more durables to sell. Then too, this might be the tail end of the soft goods boom.

It is easy for the Calamity Kates to follow such a line of thought when values of favorite stocks are melting 5%, 10%, or 15% in a day.

•
The rise in soft goods volume—certainly in dollar volume—is due to end within the space of a few months.

An optimist in the cotton textile field is one who believes prices will not turn down within six months. A hopeful view on passenger car tires is that 1947 may be as good as 1946 (which is plenty good).

Add such things up. Do they mean an over-all recession?

Not necessarily. People have been spending a more than normal portion of income on soft goods. Soon there will be a swing the other way, but maybe not all the way back to the prewar relationship.

Some nondurable goods prices may weaken. But this need not necessarily cut physical output. There are, for instance, lush margins in distribution to help guard manufacturers' margins.

•
Credit will play a part in the competition between soft and hard goods.

Consumers saved more than they wanted to during the war, more even

THE OUTLOOK (Continued)

BUSINESS WEEK

SEPT. 14, 1946

than patriotism dictated. Aside from shortages, this was due to (1) restrictions on the use of credit, and (2) the absence of instalment merchandise such as autos.

The credit restrictions won't be relaxed for a long while if the inflation-conscious Federal Reserve Board has its way, but there will be a lot more autos unless strikes and shortages thwart Detroit.

To the extent that consumers buy durables on credit, they have proportionately more dollars left over to buy nondurables.

And, if nondurable prices decline, the dollars will go farther. This tends to support physical volume as distinguished from dollar sales.

•
Employment figures give no indication of a business recession.

The number of employed was about stationary from July to August at the 58,000,000 level.

However, the figure to watch is unemployment. That declined by about a quarter of a million to 2,000,000 in August, even though the number of employed was virtually unchanged.

That's the way the seasonal factor works. Employment is due to decline as summer workers drop out of the labor force, but this won't mean an automatic rise in the jobless total.

•
There may be invisible shifts in the labor force if production of non-durable goods should begin to decline.

Manufacturers of hard goods could hire all the workers released if strikes and shortages don't hold them back. Wage payments conceivably could actually rise due to a shift of workers into higher-paid lines.

The high level of demand for capital equipment, consumers' durables, and housing lend credence to this supposition.

•
Production men were still struggling this week to speed assembly lines in the face of the many drawbacks which seem never to abate.

The shipping strike added evidence that the economy is going to limp as long as it is half controlled and half free.

Thousands of meat cutters were laid off for want of livestock.

General Motors' truck assembly line was shut down because suppliers couldn't get enough sheet steel for cab stampings. Strikes hit Dodge truck and Hudson assembly lines at midweek.

Auto makers complained to Washington over the growing pinch in lead.

Strikes in three important plastic-producing plants further jeopardized supplies of these already desperately short materials.

But General Electric is exceeding its prewar output, according to Charles E. Wilson, president, even though some items are made at a loss.

•
Meat shortages are accentuated now because livestock raisers rushed all salable critters to market before ceilings went back on.

Hogs that should have been kept back and fed have now been slaughtered. Weight of pork from each animal declined from 176 lb. late in July to 150 lb. the last week in August.

Cattle, too, are coming to market light. Feedlot operators, instead of buying steers, buy calves for marketing after OPA breathes its last.



Over 200 railroads in the United States use Gulf lubricants and fuels—and get the benefit of the co-operative service extended by Gulf's trained lubrication engineers.



The recommendations and practical suggestions of Gulf Lubrication Engineers are adopted by scores of leading power plants in 30 states from Maine to New Mexico.



Gulf Lubrication Engineers consult regularly with textile mill officials and operating men to help insure efficient production and low maintenance costs.



The paper mill Superintendent in the picture says, "We get greater tonnage and keep maintenance costs down by following Gulf Engineering recommendations."



Gulf Lubrication Engineers are welcome visitors in hundreds of coal mines as they make their periodic calls to insure efficient lubrication and lower operating costs.

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to insure efficient lubrication
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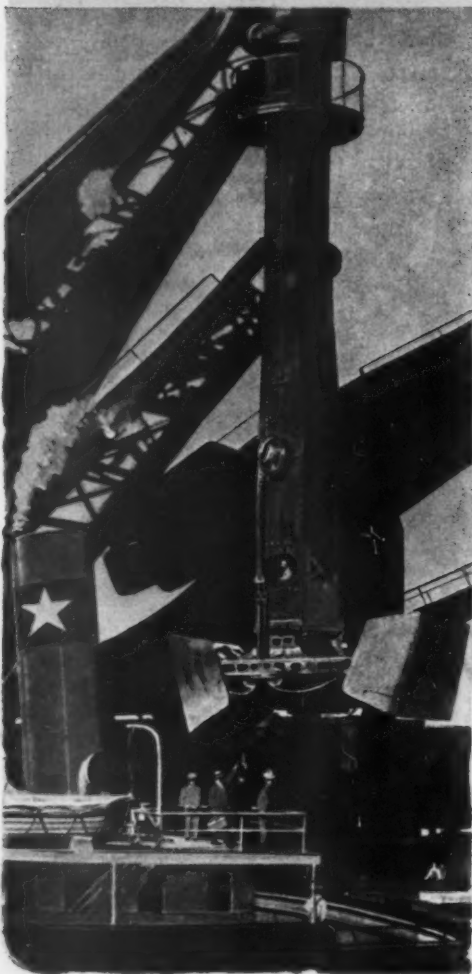


Helps make machines produce more at lower cost

Where experience counts

Design

Many exclusive features in Cutler-Hammer general purpose motor control may be traced directly to the unparalleled experience of C-H engineers in designing heavy-duty control equipment.



Construction

Long experience in the use of high-precision mass production methods is responsible for the accurate protection and uniform performance of Cutler-Hammer general purpose motor control.



Performance

The preference for Cutler-Hammer general purpose motor control by competent industrial buyers, leading machinery builders, and a majority of all motor manufacturers is based on experience with C-H performance.

Even the most brilliant minds cannot foresee the countless *little* problems that must be solved before the genius of invention can be translated into wholly reliable workaday mechanisms. That is why *experience* is such a vital asset to engineers . . . and why Cutler-Hammer Motor Control enjoys such a marked preference by the men in Industry interested in dependable machine performance. Through more than half a century, Cutler-Hammer engineers as recognized authorities have had the control engineering problems of *all* industries placed before them. From many fields they learned the full scope of "unusual" operating

conditions such equipment must meet. And this broadest of all control engineering experience shows clearly in the exclusive features of even the smallest units of present-day Cutler-Hammer general purpose motor control. To give your smaller motors the protection their importance dictates, insist on Cutler-Hammer Motor Control. Motor manufacturers recommend it. Leading machinery builders feature it. Recognized electrical wholesalers every-

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FIGURES OF THE WEEK

	\$ Latest Week	Preceding Week	Month Ago	Year Ago	1941 Average
THE INDEX (see chart below)	*183.0	†183.4	183.8	172.9	162.2

PRODUCTION

Steel ingot operations (% of capacity).....	88.5	84.5	90.3	80.3	97.3
Production of automobiles and trucks.....	76,106	†74,960	77,825	14,210	98,236
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands)....	\$15,179	\$17,045	\$21,054	\$6,793	\$19,433
Electric power output (million kilowatt-hours).....	4,184	4,404	4,412	3,909	3,130
Crude oil (daily average, 1,000 bbls.).....	4,800	4,833	4,821	4,518	3,842
Bituminous coal (daily average, 1,000 tons).....	2,083	2,036	2,043	2,043	1,685

TRADE

Miscellaneous and L.C.L. carloadings (daily average, 1,000 cars).....	87	85	85	78	86
All other carloadings (daily average, 1,000 cars).....	64	63	65	65	52
Money in circulation (Wednesday series, millions).....	\$28,506	\$28,376	\$28,326	\$27,750	\$9,613
Department store sales (change from same week of preceding year).....	+45%	+40%	+30%	None	+17%
Business failures (Dun & Bradstreet, number).....	14	28	27	19	228

PRICES (Average for the week)

Spot commodity index (Moody's, Dec. 31, 1931=100).....	327.0	332.8	348.9	255.0	198.1
Industrial raw materials (U. S. Bureau of Labor Statistics, Aug., 1939=100)...	203.5	†202.9	204.2	168.0	138.5
Domestic farm products (U. S. Bureau of Labor Statistics, Aug., 1939=100)...	289.1	†301.7	306.8	224.4	146.6
†Finished steel composite (Steel, ton).....	\$64.45	\$64.45	\$64.45	\$58.27	\$56.73
†Scrap steel composite (Iron Age, ton).....	\$19.17	\$19.17	\$19.17	\$19.17	\$19.48
†Copper (electrolytic, Connecticut Valley, lb.).....	14.375¢	14.375¢	14.375¢	12.000¢	12.022¢
Wheat (Kansas City, bu.).....	\$1.94	\$1.95	\$1.93	\$1.59	\$0.99
†Sugar (raw, delivered New York, lb.).....	4.20¢	4.20¢	4.20¢	3.75¢	3.38¢
Cotton (middling, ten designated markets, lb.).....	36.48¢	36.15¢	35.88¢	22.52¢	13.94¢
†Wool tops (New York, lb.).....	\$1.330	\$1.330	\$1.330	\$1.330	\$1.281
†Rubber (ribbed smoked sheets, New York, lb.).....	22.50¢	22.50¢	22.50¢	22.50¢	22.16¢

FINANCE

90 stocks, price index (Standard & Poor's Corp.).....	121.5	127.9	144.0	125.5	78.0
Medium grade corporate bond yield (30 Baa issues, Moody's).....	3.06%	3.04%	3.03%	3.25%	4.33%
High grade corporate bond yield (30 Aaa issues, Moody's).....	2.55%	2.52%	2.50%	2.62%	2.77%
Call loans renewal rate, N. Y. Stock Exchange (daily average).....	1½-1½%	1½-1½%	1½-1½%	1.00%	1.00%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	¾-¾%	¾-¾%	¾-¾%	¾%	¾-¾%

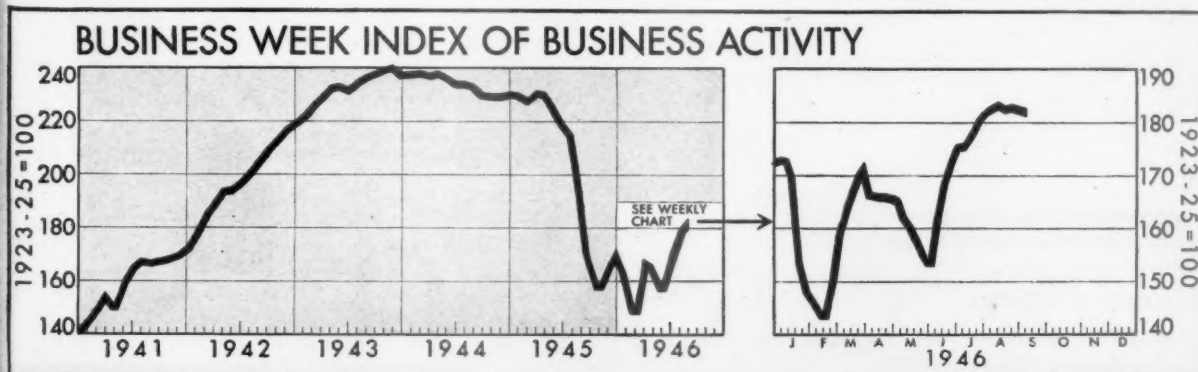
BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks.....	39,437	39,303	39,069	38,485	23,876
Total loans and investments, reporting member banks.....	59,096	59,983	59,786	62,382	28,191
Commercial and agricultural loans, reporting member banks.....	8,607	8,496	8,136	6,055	6,296
Securities loans, reporting member banks.....	3,039	3,067	3,308	4,140	940
U. S. gov't and gov't guaranteed obligations held, reporting member banks....	40,492	41,463	41,454	46,182	14,085
Other securities held, reporting member banks.....	3,427	3,442	3,455	3,333	3,710
Excess reserves, all member banks (Wednesday series).....	840	790	1,040	966	5,290
Total federal reserve credit outstanding (Wednesday series).....	24,011	24,102	24,134	23,192	2,265

* Preliminary, week ended September 7th. † Revised.

‡ Ceiling fixed by government.

§ Date for "Latest Week" on each series on request.



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Large or small, a soap plant's piping equipment represents capital investment. That's why so many agree that it pays to standardize on Crane materials. They like the way the complete Crane line simplifies every step of piping installation and maintenance, by giving this 3-way advantage—

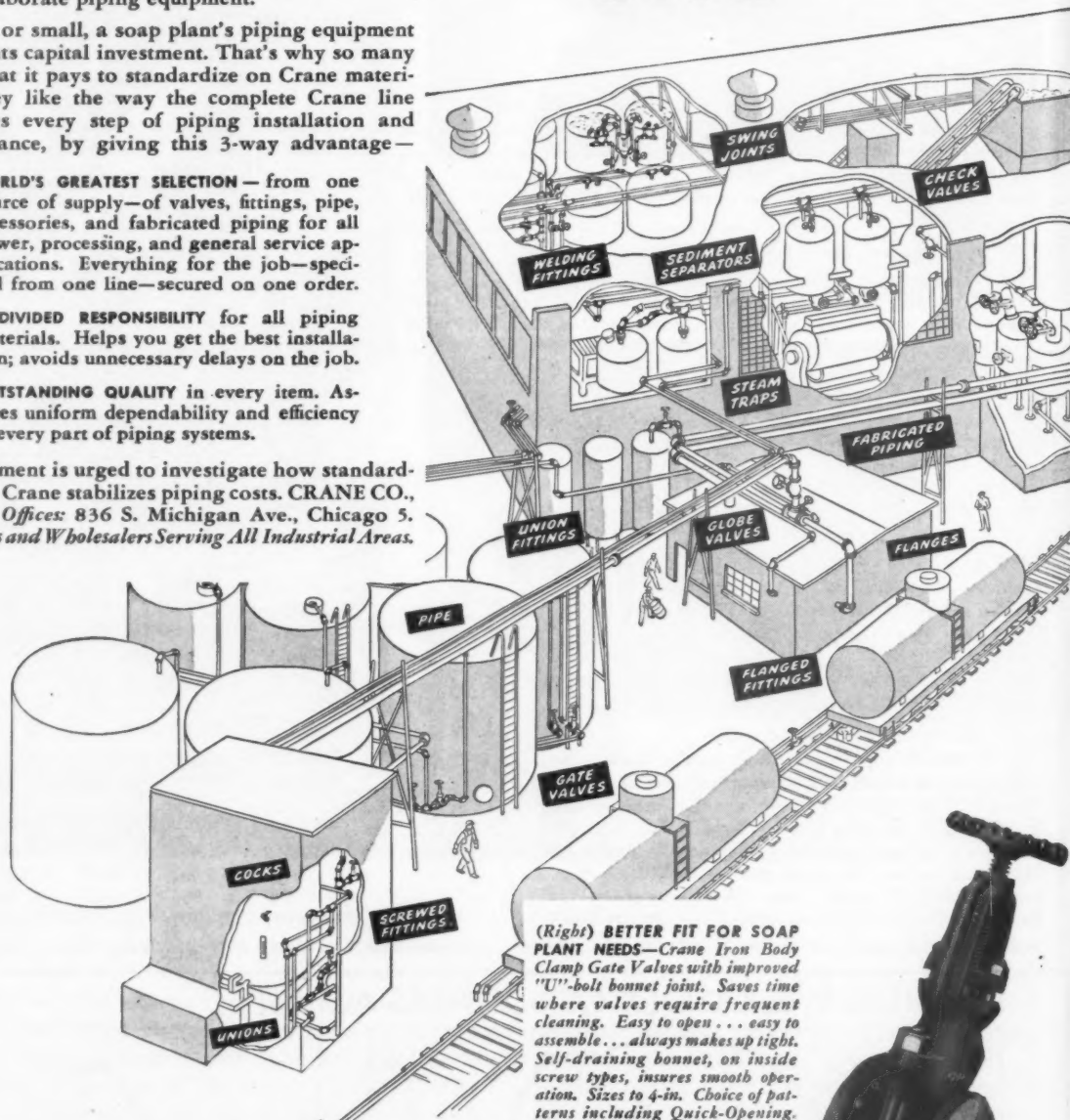
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FOR EVERY PIPING SYSTEM

Challenge to All Controls

Truman left facing biggest labor issue of year after refusal of NWSB to change decision on maritime strike. Entire wage and price program involved, not just sailors' pay and shipping rates.

Government wage control—and price control, too—was left tottering this week when the National Wage Stabilization Board's standpat decision on maritime wages put the great shipping strike issue up to President Truman.

• **Truman's Dilemma**—The choice then facing the President was: to back the board and give the A.F.L. sailors no more than the \$17.50 monthly boost that the C.I.O. union got in June; or to overrule NWSB via some new wage formula.

He knew that the first choice meant that he would have to brace himself to break the strike—by government seizure or otherwise. The second meant the end of wage control for all practical purposes, for he would certainly have to include the C.I.O. sailors in the deal. And all the other unions which have had their 18½¢ an hour would come clamoring for a second round.

• **The Operators Agreed**—The higher amounts demanded by A.F.L. were agreed to in collective bargaining between shipowners on the Pacific, East, and Gulf coasts and two A.F.L. and one independent union, but were contingent upon approval by NWSB. Such approval would permit shipowners to recoup the increased labor costs in higher charges to shippers. The War Shipping Administration gave its approval on that basis.

One possibility discussed as NWSB said "no" was that the shipowner would consent to pay the increase without government approval, with the Administration finding a way to compensate them in increased shipping subsidies.

• **Pandora's Box**—Limited as wage control has been, the Administration could hardly hope to stem the steady rise in prices without it. It is the front half of the wage-price policy. Without it there can be no price control.

A change in wage stabilization rules at this time would open a Pandora's box of thousands of union agreements containing provisions for reopening on wages under such circumstances.

Aside from its effect on the stabilization structure, the maritime strike exposed the increasing inability of the Administration to prevent tie-ups of whole industries which further cripple the limping reconversion program or to

deal with strikes against government decisions, rather than against management.

• **Lever on Congress**—This situation could have repercussions in the November elections and in the next Congress when strike control legislation is brought up. The 79th Congress went home in July without granting Truman his request, during last May's railroad strike, for drastic powers to draft strikers who would not work under government seizure.

The four-week steel strike ended last February only after issuance of a new wage-price policy which allowed C.I.O. President Philip Murray's steelworkers an 18½¢ hourly wage increase and the industry a compensating price rise of \$5 a ton.

• **Railroad Men Coerced**—To prevent renewal of a six-week coal strike after

a two-week suspension last May, the government seized the bituminous mines and wrote a contract, still in force, with John L. Lewis, head of the United Mine Workers (A.F.L.). The railroad strike was ended after two days as Truman went before Congress to plead for authority to draft strikers. He forced acceptance by two unions of an 18½¢ hourly increase, 2½¢ more than had been recommended by a government panel, with deferment of possible changes in working rules.

The present situation must be looked at against a backdrop of rivalry between the A.F.L. and the C.I.O., organized labor's opposition to interference with negotiated wage increases, and the liberalization of the price side of the wage-price policy under the new OPA law.

• **C.I.O. Grinds Ax**—In sanctioning only \$17.50 of the increases won by the A.F.L., the Wage Stabilization Board last month limited this branch of labor to a pattern established by the rival C.I.O. last June in its settlement with some of the same shipowners. In backing the A.F.L. unions—Harry Lundberg's Sailors' Union of the Pacific and the Seafarers' International Union—the C.I.O. was getting set to cash in on any



Harry Lundberg (above), head of A.F.L.'s Sailors' Union of the Pacific, did not attend NWSB's rehearing on a barred wage hike. He was too busy battling "outside political forces injecting themselves into the strike"—a reference to leftist C.I.O. unions who had been quick to back the A.F.L. ship tie-up.

excess increase approved for the A.F.L.

The rivalry between the A.F.L. and C.I.O. maritime unions was obvious, with the C.I.O. suspecting the shipowners of deliberately making a more favorable settlement with the A.F.L. to embarrass the C.I.O.'s Committee for Maritime Unity.

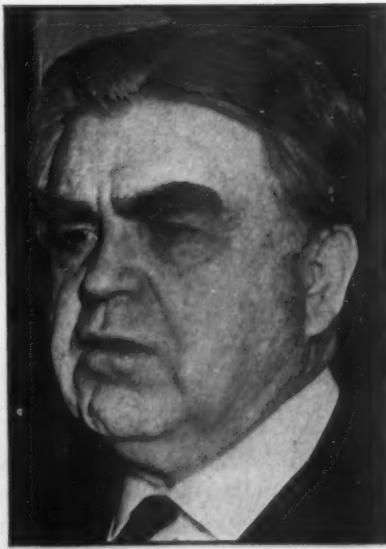
• **NWSB Under Attack**—Both A.F.L. and C.I.O. would like to abolish NWSB despite the fact that it usually denies employers the right to use wage

increases in seeking price relief, rather than refusing a wage increase. Shipowners were always free to pay increases higher than the \$17.50 if they could absorb the excess costs.

Both labor organizations want credit for scuttling NWSB by withdrawing representation in its tripartite structure. However, the Administration could extend the agency's life through the use of an administrator, as industry spokesmen have advocated.



Paralysis crept over Gotham this week as unmanned freighters and barges stayed moored at docks, fleets of trucks (above) huddled silently at freight terminals. The maritime strike, one of the biggest and most important of modern times, brought shipping to a dead halt in ports everywhere. But New York—fountainhead of the nation's business—had an added woe. A local strike of A.F.L. truck drivers completed the paralysis; stocks in stores neared the vanishing point (below, left); material-short industries prepared to shut their doors. And another growing shadow in New York was John L. Lewis and his District 50 to which belong 900 Long Island Rail Road workers who have refused to postpone a Sept. 24 strike date—a body blow to many thousand commuters.



Store Sales Soar

Reserve Board index is at record, and indications are that climb continues. Biggest holiday rush ever seen is predicted.

While businessmen last week uneasily shifted their glance back and forth between a falling stock market (page 17) and restive labor unions (page 15), the Federal Reserve Board brightly announced that the adjusted index of department store sales for August almost blew the top out of the thermometer.

Standing at a record 296, the index (on an adjusted basis) was 8% over July, 19% over July on an actual cash basis, and 48% over August, 1945 (although the incidence of V-J Day a year ago set off a ten-day buying slump that somewhat invalidates comparisons).

• **Still Climbing**—Department stores accepted what looked like a miracle—at least to those who had been loud in predicting buyers' strikes—with utter equanimity. Preliminary September reports indicated that sales were still climbing.

Behind the sizzling sales are some obvious reasons:

(1) The advent of more durable goods is opening up new sales avenues.

(2) Higher prices mean higher sales, as measured in dollars.

(3) Near-full employment (BW—Sep. 7'46, p15) is maintaining big payrolls, broad spending power.

• **A Barometer?**—Would the uneasiness in the stock market affect department sales soon? Most proprietors pool-poohed the idea.

A far bigger—and incessant—problem is that of inventories. What will the stores have to sell during the hectic Christmas season if they are selling everything now?

A combination of reasons—mainly a bigger flow of goods, and a higher evaluation of them—is preventing the inventory situation from getting too serious. In fact, in the first seven months of 1946 the adjusted index of stocks of goods rose about 33% while sales rose approximately 20%.

• **From Every Source**—And department stores are still ordering from every available source with a zeal close to frenzy. Outstanding orders in June were 3.4 times sales. In July the ratio was 4.5.

Observers who believe this rise in ordering is a vague index of order duplication, and might some day lead to a collapse of the supposedly phony demand structure will get a sharp reply from department store controllers. With Christmas coming on, they say, goods and more goods are necessary. After the holidays will be time enough to worry.

Profits: Key to Stock Tumble

Although Wall Street has many explanations for market's slump—including labor, OPA, and foreign situation—fact remains that production statistics don't offset disappointment over earnings.

More than \$13,500,000,000 in paper value has been wiped from the stocks listed on the New York Stock Exchange since the market hit its top in May.

Approximately \$4,800,000,000 was melted away in August as the rate of decline on the Big Board started to accelerate. And then, in the first five trading days of this month, when the market really started to fall out of bed, losses amounted to \$3,800,000,000.

• **By Companies**—Translated into terms of what happened to prominent common stocks, the figures were equally shocking. General Motors this week was down \$836,000,000 from its market evaluation of \$3,500,000,000 end of

May. American Telephone had dropped \$537,000,000 from \$4,800,000,000; du Pont had \$473,000,000 lopped off its former \$2,440,000,000 evaluation; Pennsylvania had lost \$190,000,000 of its \$745,000,000; Montgomery Ward \$188,000,000 of \$540,000,000; U. S. Steel \$163,000,000 of \$785,000,000.

• **Jolt to Millions**—Those were only paper figures, it's true. But the drastic extent of the decline to date gives some idea of how badly investors' confidence has been shaken lately. And they can't be blamed for wondering now if we aren't indeed in the early stages of a prolonged bear market.

What is causing this recent persistent

sharp price weakness at a time when industrial production has been steadily climbing to ever-new peacetime highs?

• **As Street Sees It**—Here is a list of Wall Street's more important answers: (1) the labor outlook, (2) the tense foreign situation, (3) fears over OPA policies, (4) the thin markets seen since margin trading was banned, (5) hardening money rates, (6) serious congestion in the new issues market, (7) the now disproved belief that we could swing easily from a wartime industrial prosperity into a record-breaking postwar boom, (8) too much early optimism over 1946 industrial profits, (9) the drastic 1946 collapse in rail earning power, and (10) the recent disclosures of skyrocketing inventories.

Besides, an intangible factor has been playing an important role. Recent events have revived memories of the aftermath of the 1929 and 1937 bull markets. Many investors now are recalling the deceptive technical rallies that followed the first serious drops in those periods.

• **Worry Increases**—Probably the most potent factors of late have been those pertaining to the labor, OPA, and the foreign situation—particularly the first two.

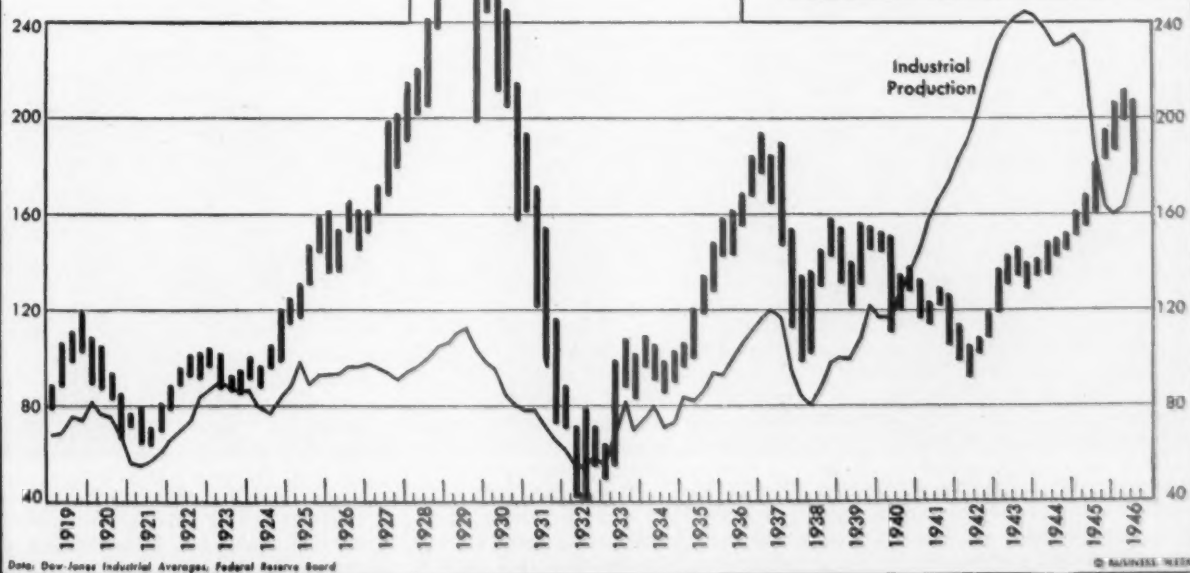
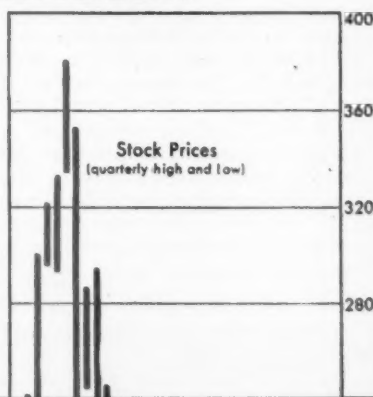
Rightfully or not, worry has been growing in recent months over the effect that another relentless grapple between workers and management might have. This sharp apprehension has been heightened by press reports indicating General Motors' own expectations of another wave of strikes, and by C.I.O.'s new proposal that portal-to-portal pay be applied to industry generally.

OPA is blamed for continually interfering with the basic law of supply and demand.

• **Edge Taken Off?**—Many market participants, in fact, contend that OPA

THE STOCK MARKET— BUSINESS BAROMETER OR BURDEN?

Business activity has a way of responding to major swings in stock prices—and it makes little difference whether stocks forecast the business trend or whether popular psychology is so affected by the course of prices that business just goes where the ticker points. What matters now is that stock prices, which had been going down in a series of stairsteps since the market topped off in May, have taken a tumble. Is this a bear market? Does it mean an early end to our post-war upturn, or can business carry on?



Data: Dow Jones Industrial Averages, Federal Reserve Board

© BUSINESS WEEK

Atomic Power Plants Await Political Accord

Overshadowed by the awesome implications of military use, atomic energy for peacetime power purposes received a modicum of recognition from the government this week.

The recognition came in a report on the costs of nuclear power, submitted to the United Nations Atomic Energy Commission by Bernard M. Baruch, United States representative. It was based on a study made under the supervision of Dr. Charles A. Thomas, vice-president and technical director of Monsanto Chemical Co., which operates the Clinton Laboratories at Oak Ridge, Tenn., for the Manhattan District. Thomas also was one of the five consultants who drew up the State Dept.'s famed "Report on International Control of Atomic Power" (BW-Mar.30'46,p5).

• **Low-Cost Operation**—Most spectacular thing about the Thomas study is that, even at this early stage, operating cost of a nuclear power plant presumably can be brought close to that of a conventional coal power plant—0.8¢ per kwh. for the nuclear plant, 0.65¢ per kwh. for a coal plant.

And the estimated cost of the nuclear plant—\$25,000,000 for one producing 75,000 kw.—while considerably more than the \$10,000,000 cost for a comparable coal installation, is



Dr. Charles A. Thomas

just about the same as for a hydro plant of similar capacity. The hydro plant, of course, would have no fuel expense; what the fuel expense would be in a nuclear plant the report does not say. But hydro plants must be built where water power is available, while nuclear plants could be erected close to the point of power demand. This would cut down trans-

mission costs, which often exceed production costs in power systems.

• **Possibilities**—Thomas, in a talk before the American Chemical Society in Chicago, stressed three potential applications for nuclear power: (1) greater decentralization of industry, (2) industrial development of isolated parts of the world where other fuel costs are prohibitive, and (3) use in operating or standby plants for existing large utilities. In the second and third connections he mentioned the possibility of utilizing the gas turbine (BW-Sep.7'46,p58) as a power source which could be superior to steam.

The Thomas study also mentioned the possibility of developing smaller nuclear plants (power experts mention 20,000 kw.), which would still further reduce transmission costs and permit greater flexibility in power systems.

• **Obstacle**—But until the United Nations agree on some form of international control of atomic energy, talk of nuclear power plants appears largely academic. For the fact remains that a plant producing power through a plutonium pile would also produce plutonium. Operating costs in the hypothetical plant allowed for use of such plutonium in power production. It could just as well be recovered for use in an atomic bomb.

regulations and the labor-management tug of war have already combined to take the edge off a good part of the initial postwar boom without producing much in the way of benefits for business or the public generally. And they have lately been wondering whether the higher operating costs arising from those two causes may not eventually force more than a few basic industries to price themselves out of much of the huge markets they had expected.

Their fears in this respect are well confirmed by market statistics. The best acting stocks lately have generally been those of companies whose labor costs absorb a less-than-average percentage of the sales dollar and for whom OPA regulations haven't proved too costly.

• **Looking Abroad**—Where the foreign situation is concerned, probably few market participants actually believe war is near. Many, however, are fearful of explosive incidents.

With such factors added to all the others that are causing investors to hesitate, the indexes indicating production rises mean less and less to the current crop of market participants.

That attitude is understandable. What market participants are particularly interested in is profits, not production.

Where the stock market is concerned, it's always tomorrow's profits that determine today's prices. It was because so many thought that 1946 was to be a bonanza year that prices rose so sharply for so long a time after V-J Day. And it's because they feel disappointed now over 1946 results to date, and are dubious about earnings in coming months, that prices are declining sharply.

• **The Harder the Fall**—Accentuating the decline has been the high level reached by the market while stock buyers were making such a liberal appraisal of 1946 earnings. There were many big paper profits available for the taking when the downtrend started, and much recent dumping of stocks has probably been due to a desire to salvage as much of these as possible.

It's a mistake to assume that margin selling hasn't played some part in the decline. Even though margin trading has been banned since early 1946, so sharp has been the drop that many an

owner of a frozen margin account has lately received a demand for additional collateral.

• **A Moot Point**—Obviously, there has been less margin-selling recently than in other critical periods. However, whether abolition of margin trading has been entirely beneficial is a moot point. Its absence has contributed greatly to today's alarmingly thin markets. And missing has been the support buying that often had its origin in times like these in speculative margin accounts.

Wall Street, despite a growing number of red-hot bears, still doesn't think generally that the market is heading into a sustained decline. However, it isn't going out on the limb with any predictions concerning the point at which stocks can be expected to stabilize.

• **Reasons Why**—Two special reasons appear to be dictating this cautiousness. This is the Street's first declining "cash market," and it's not sure the old signals will have the same significance. And it doesn't think the selling psychology now dominant can be changed by favorable statistical studies but rather that it must burn itself out.



Science Dons a Uniform

Basic research, once the beneficiary of industry, is passing into the hands of Army and Navy. Business has a heavy stake in the military's far-reaching plans to extend frontiers of knowledge.

Scientific research—the “pure” kind that often seems to investigate nature for the sheer fun of it—has become a federal responsibility in the postwar world, both as to direction and as to financing. And more of it is scheduled for the coming year than ever before in this country.

Partly by design, partly by default, federal support of pure science is today almost completely under military control. Its general direction is being set by military needs; its finances are coming from military funds.

The odds are getting better all the time that pure scientific research will become, permanently, a branch of the military establishment.

• **Portent for Industry**—Almost unnoticed outside the academic world, these developments have their significance for industry. The pure science of today, of course, is the product development of five years from now and the mass production of five years later. Science in the past has drawn a major part of its support from industry, sometimes directly, more often indirectly. And,

more or less automatically, its broad directions have been shaped by the needs of industry.

► For better or for worse, government has largely taken over the financing job, and long-range business planning is inevitably concerned with what that fact does to science. Management must assess the benefits to industry of a possible increase in the flow of new basic knowledge into industrial designing rooms. It also must weigh the danger that the flow may dry up if scientific curiosity is drawn by the magnetism of easy funds for research in directions remote from civilian application. ◀

Too, businessmen will want to consider the likelihood that industry itself will be drawn into unexpected paths by the wanderings of the scientific work on which much of it is built. For instance, exploration of the underlying facts needed for work in remote control is today one of the most active interests

of university laboratories—because of the military interest in guided missiles. It may be that results in this field could lead to commercial applications of a sort which would never have developed spontaneously.

Before the war, the United States was anything but a leader in basic research. Product development, yes; production engineering, even more so. But in fundamental scientific data we were an importer. Expenditures for research in pure science, in 1938, totaled less than \$40 million. The biggest part, some \$23 million, was done at universities.

The total is pretty small alongside the \$227,000,000 spent on applied research. By contrast, the British were spending nearly as much on pure as on applied research.

• **Change of Sponsors**—The bulk of the \$40,000,000 for pure research came from industry. About \$9,000,000 was spent in industrial laboratories, and the financial backbone of university research was endowments and foundation grants that wore an industry coloration because of their basis in gifts from industrial fortunes. Increasingly during the thirties, also, university research was being financed through outright research contracts with business firms or trade associations. These either needed specific information or just wanted to insure continued progress in fields in which they were interested.

The war changed all that. The uni-



As scientific research moves into government hands and under military control, the key men seem to be the Navy's Vice-Admiral H. G. Bowen (see cover) and his assistant director of the Office of Naval Research, Rear-Admiral

Luis de Florez (left); the Army's Major General H. S. Aurand (right), who heads a General Staff Division of Research & Development; Dr. Vannevar Bush (center), civilian chairman of a board to coordinate their programs.

Funds for the Workshops of Science

(Figures in Thousands of Dollars)

Year	Industry	Nonprofit Industrial Research Institutes	Government (Federal and State)	Colleges and Univer- sities	Research Institutes	Total Scientific Research Ex- penditures
1920....	\$29,468	NA	NA	NA	NA	NA
1921....	37,400	NA	NA	NA	NA	NA
1922....	44,000	NA	NA	NA	NA	NA
1923....	50,000	NA	\$15,615	NA	NA	NA
1924....	58,000	NA	16,336	NA	NA	NA
1925....	64,000	NA	18,087	NA	NA	NA
1926....	70,000	NA	16,995	NA	NA	NA
1927....	75,928	NA	17,119	NA	NA	NA
1928....	88,000	NA	17,757	NA	NA	NA
1929....	106,000	NA	22,825	NA	NA	NA
1930....	116,000	\$560	24,066	\$20,353	\$5,212	\$166,191
1931....	131,320	1,240	26,945	NA	5,218	NA
1932....	120,000	990	40,081	24,840	5,159	191,070
1933....	110,268	740	NA	NA	4,887	NA
1934....	124,000	1,540	22,243	19,286	4,767	171,836
1935....	136,000	2,470	25,328	NA	4,785	NA
1936....	152,000	2,530	33,891	25,000	4,701	218,122
1937....	160,000	3,580	40,786	NA	4,635	NA
1938....	177,168	4,080	49,382	28,496	4,596	263,722
1939....	200,000	5,000	NA	NA	4,531	NA
1940....	234,000	6,110	69,136	31,450	4,549	345,245
1941....	NA	9,139	207,259	NA	NA	NA
1942....	NA	14,079	332,151	39,575	NA	NA
1943....	NA	NA	561,507	NA	NA	NA
1944....	NA	NA	719,813	NA	NA	NA

NA = not available

In the United States, pure science, the source of man's knowledge of his physical universe—and ultimately of industry's new products—has long been starved to feed its wealthy dependent, applied science. The figures above (from "Science, the Endless Frontier," Government Printing Office, 1945) are fairly impressive because they show total United States outlay for all forms of scientific investigation. But pure science received only about 15% of the total, its 1938 share, for example, being a mere \$40,000,000.

versity and foundation research laboratories were drafted into military work and the research scientists with them. Their activities skyrocketed—in more senses than one. By 1943, the Office of Scientific Research & Development alone was placing about \$90,000,000 a year in research contracts with universities. And the Army, Navy, and Manhattan District placed additional millions directly.

• **New Function**—The pure scientists were busy. But pure science stopped. Essentially, the universities were converted into industrial-type laboratories concentrating on weapon development rather than basic discovery. Even the atom bomb project, abstruse as it looks, was primarily an engineering problem by the time the government picked it up in a large way in 1942—which may be the reason this country, with its vast pool of engineering skills, forged so far ahead of all others that had been working on the idea.

Though the scientists felt that their real work was in abeyance during the

war, dividends obtained from prewar research and the tremendous technical achievements of the war years have resulted in an almost unanimous postwar determination, among the public and in government, to push scientific research as never before. It is a determination springing from a double origin—a hope and a fear

I. PROGRAM FOR SURVIVAL

Quite early in the war the hope arose that immense postwar benefits could be achieved, particularly in industry and medicine, if something of the wartime scope and coordination of research could be continued. Back in 1944 President Roosevelt asked Dr. Vannevar Bush, director of OSRD, to prepare a postwar plan for federal financing of science.

Dr. Bush, a year later, submitted a report (BW—Jul.21'45,p120) recommending creation of a national foundation to operate something like the private foundations, making grants to nongovernmental research and teaching

organizations. Bush contemplated a scale of operation starting at something like \$10,000,000 a year, expanding to around \$50,000,000.

• **Cause to Act**—The fear came later. It came as the closing months of the war gave the first glimpses of an utterly new and fantastic kind of warfare. Thirty years of development of the airplane had produced a vehicle which could travel only about twenty-five times as fast as horse cavalry. But plutonium is an explosive something like half a million times as powerful as TNT. Hiroshima and the V-2 foreshadowed a world in which cities vanished in one mushroom of smoke and the moon was a military base.

Clearly, any nation which failed to keep in the forefront of scientific development would be in deadly peril. Equally clearly, the United States government, one way or another, was going to do whatever had to be done to hold its place.

• **Controversy**—Congress quickly seized upon the Bush report. Half a dozen bills to implement it were introduced last year. Leadership on the issue was assumed by Sen. Harley M. Kilgore (BW—Aug.25'45,p63), New Dealer from West Virginia and chairman of a Military Affairs subcommittee which, all through the war, had maintained a running investigation and criticism of the war program from a position somewhat to the left of the Truman (later the Mead) committee.

The main principle was soon caught in a crossfire of contending parties. There were three controversial issues: (1) the degree of centralized government control over the program; (2) the handling of commercial benefits emerging from government-sponsored research; and (3), to a lesser extent, the inclusion of the social as well as of the physical sciences.

The New Dealers, labor spokesmen, and most government people concerned with science wanted to treat the research foundation as an ordinary instrument of government. They stressed the advantages of coordination and argued for a single full-time administrator. And they plumped for a general policy of dedicating all of the research results to the public.

• **Objections**—The universities were queasy. They wanted the money, but they feared government domination of their research programs. They preferred, as the Bush report recommended, to keep the foundation a quasi-governmental affair administered by a board of scientists who would serve part time.

► **Businessmen** were bothered by the proposed no-patent policy. They suspected that in reformist hands the foundation program would soon undermine the whole

patent system, long a favorite object of New Deal attack. For the same reason, most businessmen preferred the loose board set up to a more centralized system.◀

Conservative congressmen freely predicted that federal support of the social sciences would degenerate into a program of radical propaganda.

• **Legislation Killed**—Under these pressures Sen. Kilgore yielded on the social science issue, but was able in the closing days of the session to push through the Senate a measure otherwise representing the leftist position. The more conservative House commerce committee sat on the bill long enough to prevent House action.

For this year, at least, the hope was frittered away. The fear remains.

II. NAVY TAKES THE HELM

In the absence of any civilian program for science, the military moved in—the Navy about a year ago, the Army in recent months.

It was bound to happen. In the past, military and industrial technology have been largely parallel. The bomber and the airliner grew up side by side. Military TNT grew out of the development of nitrate organics such as commercial dynamite. The munitions makers could draw on industrial skill and academic knowledge and had few worries about fundamental research.

• **Necessity**—Today the technology of killing has struck out into new fields

where there are—for now, at least—few industrial equivalents. The weapon-designers are operating at the frontiers of knowledge. They need, and know that they need, a continual flow of new knowledge and ideas about the fundamental nature of matter, energy, life, and the human mind.

Just before the end of the war, the Navy tackled this problem by setting up the Office of Research & Inventions. This year permanent legislative authorization for the agency and for the loose negotiated type of contract it uses was obtained, and ORI was reorganized last month as the Office of Naval Research under Vice Admiral H. G. Bowen.

• **Broad Objective**—ONR is instructed to steer clear of the business of developing specific naval equipment, which is the job of the bureaus of ordnance, ships, and aeronautics. ONR's task is to stimulate and guide fundamental research. It does some work on its own in the Naval Research Laboratory at Washington, but mostly it works through civilian colleges.

Operations began rather slowly last year. As one university after another was released from its wartime OSRD and Manhattan District contracts, the Navy stepped in and arranged financing. By July, it had arranged to spend about \$10,000,000. For the coming year, ONR has \$45,000,000, of which about \$11,000,000 will be spent at naval laboratories, about \$7,000,000 for basic work in industrial laboratories, and about \$26,000,000 at universities.

• **Contract Terms**—The financing mechanism is a loose form of nonprofit research contract. Sometimes ONR arranges for investigation of a particular subject, but ordinarily a college or other research group works up a program of investigation it would like to pursue and brings it to the Navy. If ONR can see some possibility of ultimate results having military value, and if it thinks the institution has the men and the equipment to do the job, it will contract to support the program.

The typical contract is on a cost-plus-nothing basis covering salaries and a percentage of institutional overhead worked out by Navy auditors. ONR fights shy of financing buildings, but it will pay for elaborate equipment provided this is theoretically movable so that the Navy can keep title.

▶ The contracting institution is free to publish results in any way it wishes, unless something with a security angle comes up. As a matter of fact, ONR is rather disturbed by the slow rate of publication in present learned journals and will shortly arrange for publication in its own journal.

This research organization also



Brig. Gen. Georges F. Doriot, who came to the wartime Army from the faculty of the Harvard School of Business Administration, carries on as Gen. Aurand's deputy for postwar research.

may patent any commercially valuable results of the research. Only right reserved is a free nonexclusive license to the government.◀

• **Free Navigation**—The contract defines the subject of the investigation in rather general terms. Periodic reports of progress are required, but the contract calls for no specific results. Rear Admiral Luis de Florez, spark plug of the Navy's research program, told Congress: "If I knew in advance what the results will be, the work wouldn't be research. In research, by definition, you can't know what the results will be." If research wanders off in unexpected but fruitful directions, the Navy's contract can be adjusted to fit.

Admiral Bowen's people are sophisticated and enlightened. Realizing that original research cannot be regimented, they are consciously trying to maintain a civilian feel in their outfit and to operate in much the same way that a national foundation would. But, necessarily, in approving projects they're looking for a military application, even though a remote one.

• **Initial Pattern**—The pattern of research which this produces is suggested by the first year's contracts. About 40% of these are for studies in nuclear physics, as might be expected. Electronics is next, with 14%, while medicine and fundamental studies in the problems of guided missiles each account for a little over 10%. The rest are scattered among chemistry, geo-



Brig. Gen. Earl S. Hoag, who came to the War Dept. from a succession of Air Transport commands, takes over the development side of the Army's excursion into postwar science.

physics, mathematics (mostly development of computing machines as research tools), mechanics, and other branches of physics.

ARMY FUNDS DEPLOYED

The Army has been slower than the Navy in getting into basic studies, but it is moving into the field now and it packs the big bankroll. The Army research budget this year is about \$280,000,000, but the largest part of this will be spent on development work at Army centers and through industrial development contracts. However, about \$70,000,000 is earmarked for fundamental studies at universities.

At present the Army has no central operating organization for scientific research. Contracts and plans are made by the individual branches. It can probably be assumed that this will result in a somewhat closer connection with development of hardware than does the Navy's program.

• **G-6 Established**—Coordination of Army research has been assigned to a new division of the General Staff, headed by Maj. Gen. H. S. Aurand. Aurand lays particular stress on the possibility of close collaboration between military and civilian scientists and engineers at the level of strategic planning—the level where you think about such subjects as biological vs. atomic warfare.

► The Army feels handicapped by its lack of legislative sanction for a broad research contract such as the Navy uses. It is now using a modi-



Senator Harley M. Kilgore, D., W. Va., fought for a New Deal bill to put the government's research planning under civilian direction, but it died, and Army and Navy moved in.

fication of an ordinary procurement contract. If Congress approves a looser contract, Aurand may take on operating responsibilities similar to ONR's.

The Army is less inclined than the Navy to yield everything on patent rights, and if it sees any likelihood of commercial applica-

tion ordinarily reserves more of a government equity.◀

• **Joint Operations**—The list of high priority Army research projects practically duplicates the Navy's program, and there is obvious room for overlapping. To coordinate the two programs, a Joint Research & Development Board has been created and is just getting organized.

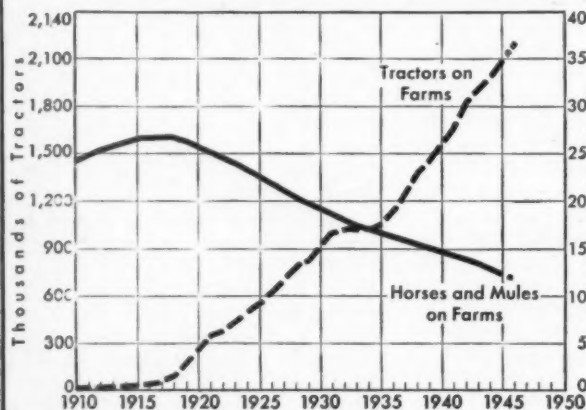
The board consists of four high-ranking officers, with Dr. Bush as civilian chairman. Chances are that the board's initial approach will not be allocation of subject matter between the services so much as allocation of institutions and personnel—permitting the Army to contract with certain research groups, the Navy with others.

Actually, the bitter subject-matter disputes are inside the Army, particularly between AAF and Ordnance, now feuding over guided missiles (BW—May 18'46, p. 7).

• **Civilian Prospects**—With Bush at its head, it is not unlikely that the joint board itself will eventually take over the job of promoting science if a civilian foundation doesn't take it over first. In basic research, there is little distinction between Army and Navy work.

The prospects for a civilian foundation are uncertain and becoming more so all the time. The question will certainly come up in the next Congress. Odds are that Sen. Kilgore will be reelected; if so, he will take up the cudgels again. But the mere fact that a research program is already going forward to the tune of \$100,000,000 a year, even though under military auspices, will

MECHANIZATION BOOSTS FARM WORKERS' OUTPUT



Data: Dept. of Agriculture.

The avalanche of food that the American farmer pushed into the Allied war effort was no surprise despite continued reductions in farm manpower. Mechanization had prepared the way for the tremendous gains in productivity. During the thirties, the drought and the depression had operated together to keep the farmer from getting the



most out of his equipment. But all stops were out during the war. From 1920 to 1945, it is to be noted, 55,000,000 acres or 15% of the available cropland, which had gone into feed for horses and mules, became available for food for people. Next wave of mechanization may occur on cotton farms with mechanical pickers displacing people.

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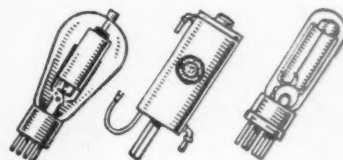
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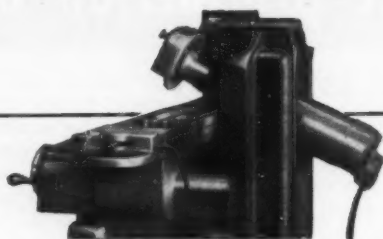
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take away much of the urgency of the foundation proposal.

• **Calculated Risk**—Particularly in the light of Navy patent policy, some businessmen may prefer the risk of the militarization of science to the creation of an agency they suspect of ideological motives.

And even though many scientists deplore the warping of the direction of research inevitable in a military program, some of the university people—with their fields well established, their file of telephone numbers organized, and the money flowing freely—may hesitate to upset a going operation.

Plant Expansion

American business is now spending for new factories and equipment at an annual rate of nearly \$13,000,000,000.

American business, which has been stepping up capital outlays steadily since V-J Day, set aside \$3,200,000,000 for new plant and equipment during the third quarter of this year, plus \$300,000,000 for rehabilitation of old plant and equipment.

• **May Be Trimmed**—These estimates (jointly compiled by the Securities & Exchange Commission and the Dept. of Commerce) indicate a 39% boost over the fourth quarter of last year—the first peacetime quarter—when the outlay totaled \$2,300,000,000.

In actuality, however, these thumping figures may be deflated a bit because of shortages and restrictions on building. Businessmen had expected to spend \$2,400,000,000 in the first quarter of 1946, but the actual total fell 10% short of that. Figures on actual second-quarter expenditures are not in yet.

• **Big Equipment Outlay**—By categories, third-quarter expenditures shape up thus:

Manufacturing companies: These are expected to expend \$1,700,000,000, representing 53% of the total capital outlay. Equipment purchases will account for 70%. On the whole, however, manufacturers' outlays (together with about \$100,000,000 to be spent by mining companies) represent only a small increase over first- and second-quarter spending.

Railroads, utilities, commercial, and other companies: Sizeable increases in the outlays of this group are planned. So far the rails and utilities have been stymied by lack of materials and labor. By the same token they now want to step up additions to, and refurbishing of, plant and equipment.

• **Way Above 1941**—Third-quarter intentions represent an annual rate of

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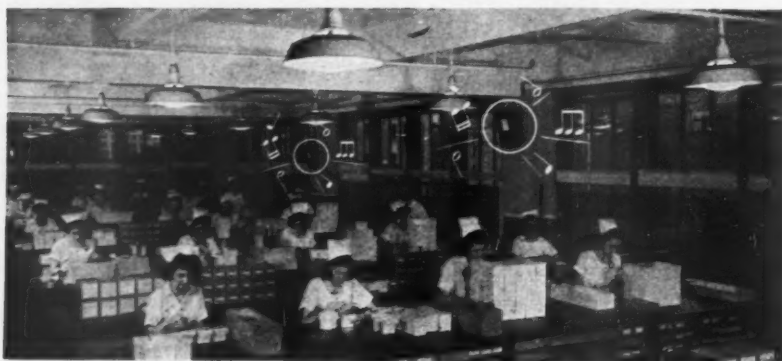
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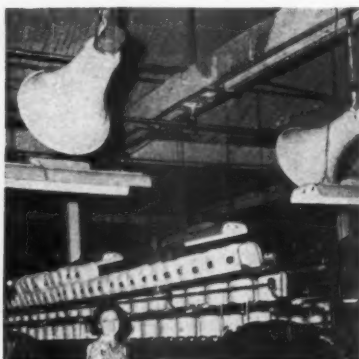
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\$12,800,000,000—54% over 1941. That year, which was also the last peacetime year, marked a peak in capital expenditures. (Much of the wartime plant and equipment expansion was paid for by the government and thus does not enter into private business totals.)

The reports on which the current estimates are based were compiled before the recent stock market break (page 17) and its effects, if any, thus are not measured.

Aluminum Issue

Washington is debating whether to maintain its plants for the extraction of alumina from domestic clays.

Is it worth while to pay some two cents a pound extra for enough aluminum to keep our hand in on processes that will reduce our dependency on ores brought across water if there's another war?

That's one element today in the intensifying Washington debate over the amount of war preparation that should be included in industrial planning.

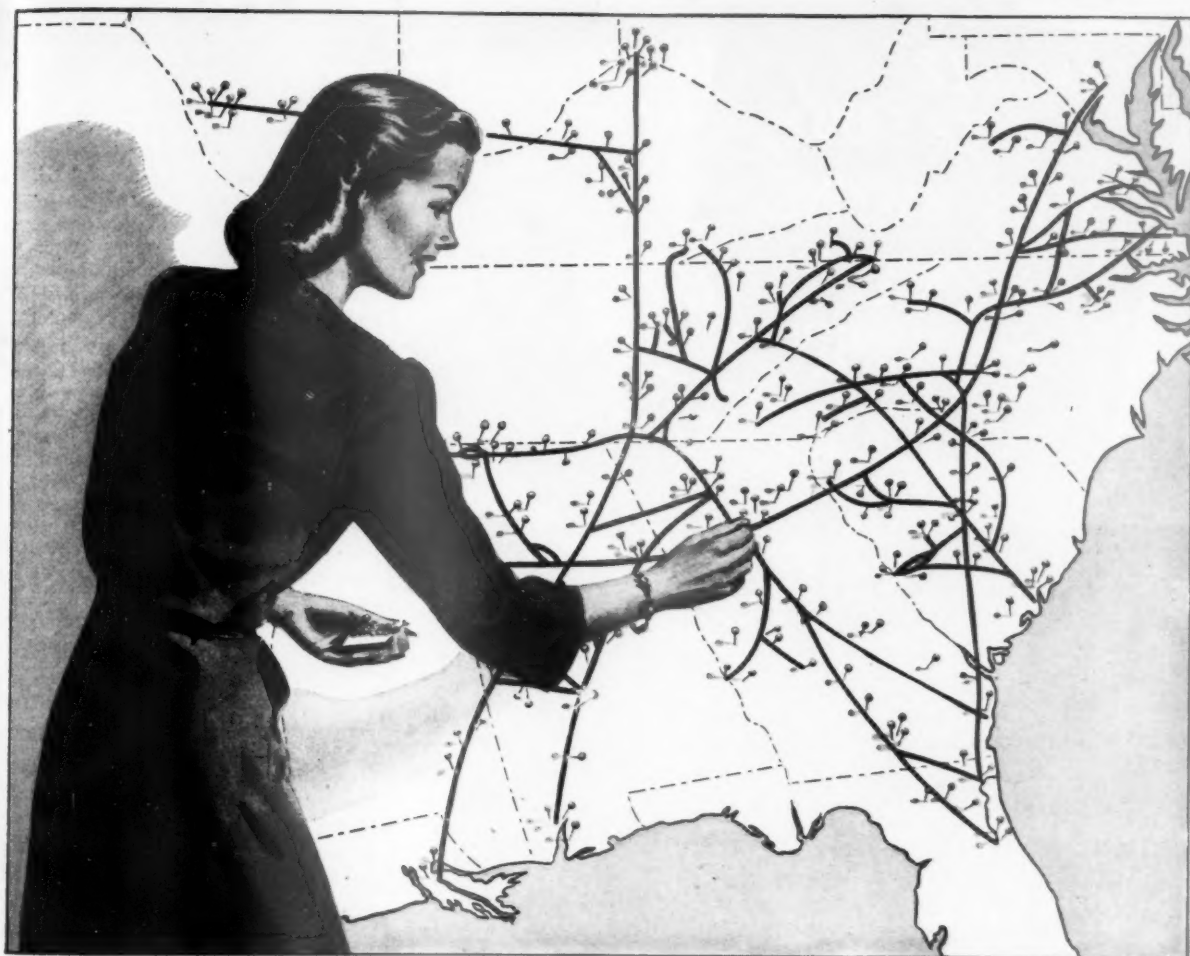
• **Not in Operation Now**—The immediate argument is over the disposition of four experimental plants for extraction of alumina from domestic clays (BW—Sep. 29 '45, p. 34). They were built by the government during the war but never got into production until after V-J Day. This summer, the Office of Defense Plants shut them down.

The issue now is whether to get rid of them, operate them, or hold them in standby. There's no question as to one, the least promising. This Salt Lake City plant, which was operated for the old Defense Plant Corp. by Kalumite, Inc., has been declared surplus.

• **Bureau Wants Plants**—The Interior Dept.'s Bureau of Mines, which traditionally carries the torch for maximum use of low-grade domestic resources, would like to see the plants continued in operation, arguing that in wartime it would be valuable to have a developed technique and skilled men. The bureau will probably ask Congress next year for funds to take over one or more of the plants. It would need an appropriation of half a million to a million a year for each plant.

The Army or Reconstruction Finance Corp., of course, could subsidize the plants. But so far the military has expressed no interest. The Civilian Production Administration is recommending that the plants be held in idle standby.

• **Electrolysis Used**—Aluminum is one of the most tantalizing materials in the world. It's perhaps the commonest of



Our Pin-Up Girl

Our "Pin-Up Girl" keeps tab on new industries for us. As new industries move into Southern Railway territory she pin-points the locations on a map. Last year she used 178 pins—and she is using even more this year.

She listens with mounting enthusiasm when our industrial development experts quote facts and figures on the unlimited opportunities in the South for economical and profitable production and distribution.

She's heard all about the South's raw materials, ample reservoir of skilled and unskilled workers, abundant power and fuel. She knows

that mild climate brings savings in plant construction, maintenance and fuel costs.

Moreover, she has learned that the Southern Railway System offers efficient, dependable, economical mass transportation for all kinds of freight . . . bringing supplies to the factory doors, and taking finished products to great consuming centers and to busy ports.

Because our "Pin-Up Girl" knows that "*industrially, the trend is Southward*," she's reserving a spot on the map for your factory.

Look Ahead . . . Look South!

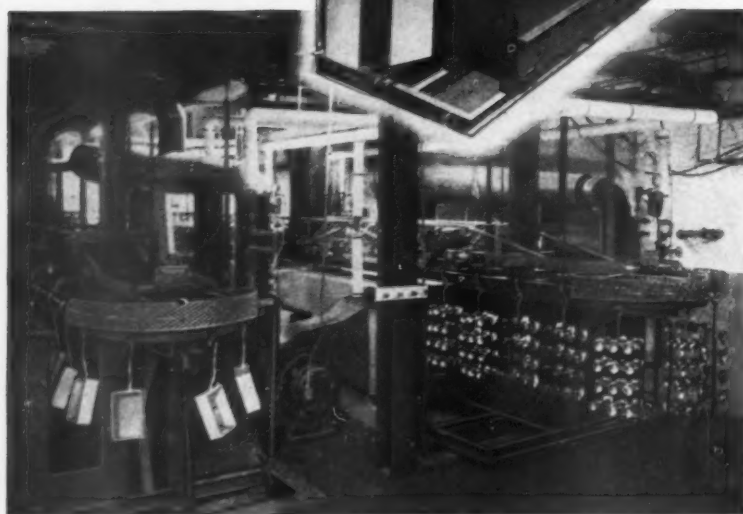
Ernest E. Davis
President



SOUTHERN RAILWAY SYSTEM

The Southern Serves the South

**ANOTHER
USER SAYS—
THESE MACHINES
SAVE
REAL MONEY**



The general manager of a modern, progressive manufacturing plant producing skates and radios (we'll tell you the name if you insist) has recently installed two Udylite Full Automatic Plating Machines. Here's what he says about them: "Everyone is enthusiastic about the performance of these machines and we estimate that we save in the neighborhood of one-third of the cost of plating over what we had before."

And this man is by no means the first to make such a statement.

Whenever any manufacturer can save one-third of his production cost it is more than casually important. How important would it be to you? Wouldn't it be worth while for you to check into what this machine could do in your plant?

THE Udylite CORPORATION
1651 EAST GRAND BOULEVARD
DETROIT 11, MICHIGAN
REPRESENTATIVES IN ALL PRINCIPAL CITIES

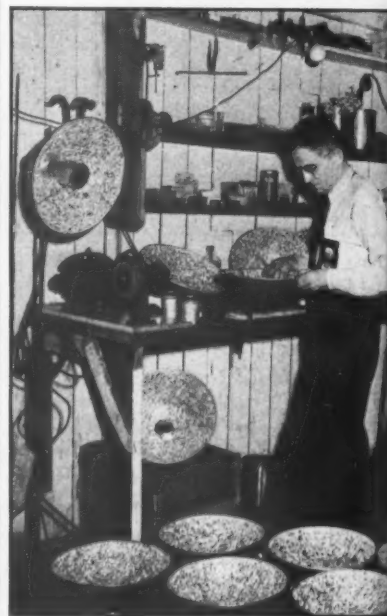
all the metals, a principal component of ordinary clay. But the aluminum is so tightly tied up chemically with other elements—principally oxygen and silicon—that aluminum until recently has been a relatively scarce and expensive metal.

The tough job is getting the oxygen out. It's done by electrolysis. A tremendous quantity of electricity—8 or 10 kwh. per pound of aluminum—is passed through a solution of aluminum oxide.

Bauxite is aluminum oxide plus some easily baked out hydrogen, mixed in with varying quantities of aluminum silicate, iron oxide, and other odds and ends. Two pounds of bauxite run through the simple and long-established Bayer process produce a pound of alumina.

Hitch is that bauxite is badly located from an economic viewpoint. The only U. S. deposits that amount to anything, in Arkansas, mostly contain a lot of silicates and are too limited to rely on—perhaps an eight-year supply at wartime consumption rates. The nearest good supplies are along the northern coast of South America.

• **Still in Operation**—When the Germans began sinking five out of six bauxite ships, it threw us almost entirely on to the Arkansas supplies. So the DPC



FOIL FOR LIGHT

To get a more even, whiter light, Fred Metlen (above), Boeing Aircraft employee at Seattle, has designed a photo lamp reflector called "Fredz Lite," which he makes in his spare time. A metal cone in front of the bulb distributes the light over the reflector. Aluminum foil covering the reflector is crinkled to diffuse the light.

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Yes, when one businessman asks another: "Which company will do the best job for me on all insurance covering employees?"...

The most frequent answer is: "The Travelers."

WHY?

Because it means better handling of all the complex and varied forms of employee insurance. Travelers men are experienced and have the background that can be found only in an organization which pioneered in Workmen's Compensation and Group Insurance.

Because lower insurance rates, as well as employee and public good will, often result from the safety engineering and sickness prevention services of The Travelers.

Because you and your business organization benefit from the intelligent handling of employee claims. The broad ex-

perience of Travelers claim men is a definite help to you at all times. The Travelers country-wide organization may be of untold value at any time. These Travelers claim men each year pay more than half a million employee claims which involve injury, illness, death, surgery, and hospitalization.

Because a plan that meets your business needs now, and that can be revised from time to time as these needs or conditions change, can be developed best by your own insurance broker or a Travelers agent, working with the specialized experts of The Travelers.

On *all* forms of Employee Insurance, you will be well served by *The Travelers*

The Travelers Insurance Company, The Travelers Indemnity Company, The Travelers Fire Insurance Company, The Charter Oak Fire Insurance Company, Hartford, Connecticut.

CELCON is the Plastic for all-temperature toughness!

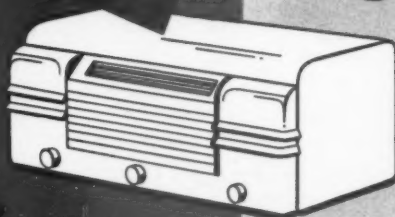
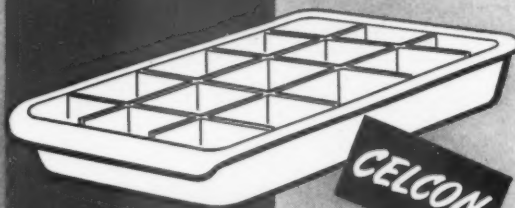
Manufactured goods with national distribution must meet the test of practically every type of climate—from sub-zero arctic temperature to tropical moist heat. That is why it is important to use materials which will stand up to temperature and humidity variations. In thermoplastics that means CELCON.

Celcon has maximum toughness over a wide temperature range . . . excellent dimensional stability and form retention in moist heat . . . good outside weathering characteristics and excellent electrical properties.

CELCON IS A NEW NAME

As Lumarith E. C. (ethyl cellulose), Celcon was war tested in the toughest applications any thermoplastic faced, as parts for fighting planes, rockets, the VT fuse . . . machete handles for the tropics, flashlights for arctic service . . .

In your product planning, don't overlook tough, dependable Celcon. It is produced in pellet form for high-speed injection and extrusion molding—in a wide color range. Let the Celanese Technical Service Staff supply you with specific information. Celanese Plastics Corporation, a division of Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y.



Celanese* Plastics

LUMARITH* FORTICEL* CELCON†
CELLULOID* VIMLITE*

†Trademark

*Reg. U.S. Pat. Off.

went into the clay business from two angles.

One was aimed at stretching the Arkansas bauxite. Facilities were installed at the government's tremendous bauxite-processing plants at Hurricane Creek and Baton Rouge and at the existing St. Louis and Mobile plants of Aluminum Co. of America.

And on a much smaller scale, the four experimental plants were built to extract alumina from natural clays.

• **Similar Processes**—In each case, the process is based on exposing the aluminum silicate to something with more affinity for silicon than aluminum has. In the "red mud" plants, and in the plants at Laramie, Wyo., operated by Monolith Portland Cement Co., and at Harleville, S. C., operated by Ancor Corp., the something is limestone (calcium). When the clay and limestone are cooked together, the silicon moves over and forms calcium silicate, leaving behind aluminum oxide.

What makes this setup economically possible is that the calcium silicate is the raw material of cement and is also a fertilizer for neutralizing acid soils.

The Salem (Ore.) plant run by Columbia Metals Corp. treats the clay with ammonium sulphate, which is afterwards usable as fertilizer. The Salt Lake City plant used sulphuric acid.

• **No Cost Evidence**—None of the four experimental plants gave any conclusive evidence on costs. What information was obtained indicates that use of clay instead of bauxite still adds 1½-2¢ a lb. to the cost of aluminum—big enough to be disqualifying, commercially, but small enough to be tantalizing.

Drain on Power

Electric utility capacity is taxed by increasing demand, new consumers. Industry fears shortage is possible later.

Add electric power to the list of possible shortages which conceivably may harass industry—and domestic customers—in the months ahead.

With the approach of fall and winter, as shorter days require more electricity for lighting, and as industry increases its demand, generating stations will be called upon for more and more power. Distribution systems, too, will be taxed to meet increased requirements of new businesses, new housing, and expanded rural electrification (BW—Sep. 7 '46, p. 19)—2,800,000 of the nation's 5,800,000 farms still are without service. So the question which has utility men worried is, "Will the power be there?"

• **Near Wartime Record**—Pointing up their concern was the announcement of the Edison Electric Institute that in the week ended Aug. 24 the electric utility industry distributed 4,440,040,000 kilowatt hours of energy. Only once previously has an August week's output been higher, and that was the week ended Aug. 19, 1944, when peak war activity pushed the total to 4,451,076,000 kwh. (Output for 1944 was a record 228,188,447,000 kwh.)

But that 1944 peak occurred when wartime brownouts and blackouts were in effect, when the government and the

50-second QUIZ that may save you HOURS ...and **BIG MONEY**, too!

Q. 30% to 63% savings on printed and duplicated work? Fantastic!

A. Yes. But thousands of firms are doing it -- by composing forms, bulletins, reports, price lists, house organs -- on Vari-Typer®.

Q. But does it take a high-priced compositor to run it?

A. No! Your office typist operates Vari-Typer.

Q. What's this about composing in all modern languages? A different machine for each language, I suppose.

A. Certainly not! One Vari-Typer -- any Vari-Typer -- composes in any modern language. Look: English, Spanish, Russian, French...hundreds of type styles and sizes, too! One Vari-Typer handles all.

Q. But how does Vari-Typer cut printing costs?

A. You cut out expensive type-setting completely. On duplicated work you save paper, ink, stencils, collating time. Vari-Typer gets up to twice as much text on a page as a standard typewriter. And you often get your finished job before you could see type-set proofs!

Q. Sounds good. Where can I learn more?

A. It is good...and there's lots more in the 3-color-16 page booklet "Vari-Typer, a New Tool for Business". It's free! Send coupon to Dept. BW-2.



*Reg. U. S. Pat. Off. and foreign countries.



RALPH C. COXHEAD CORP.

333 AVENUE OF THE AMERICAS, NEW YORK 14, N. Y.

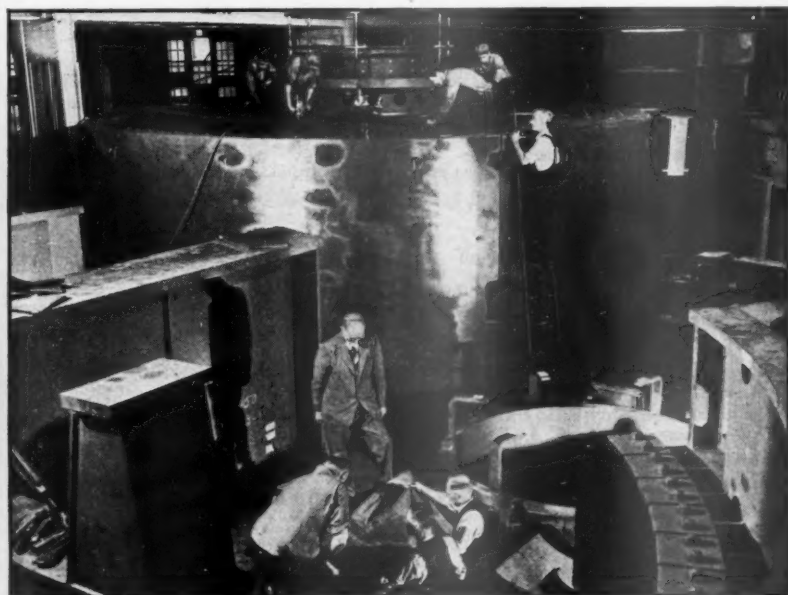
Send me "Vari-Typer, a New Tool for Business".

Name _____ Title _____

Company _____

Address _____

City _____ State _____

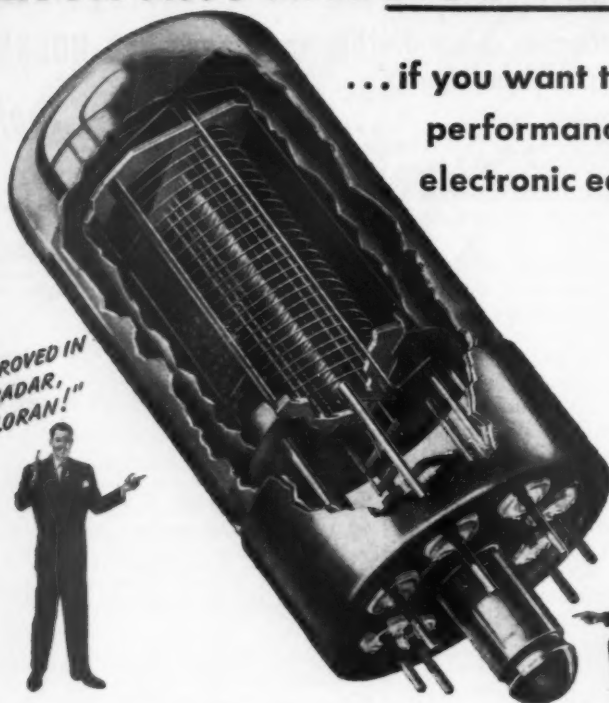


Power companies are desperate for equipment such as the 25,000-kva. water-wheel generator nearing completion at General Electric Co.'s Schenectady works. Like all generators it was made-to-order, will be used in Tacoma, Wash.

Look into this Lock-in tube

...if you want to step-up performance of your electronic equipment!

"PROVED IN
RADAR,
LORAN!"



"DEFIES JARRING
—STAYS PUT!"

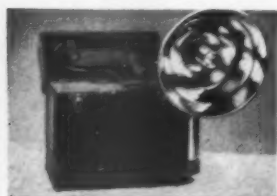
Electronics, a major factor in winning the war, is now playing a tremendous role in the swift technical progress of modern peace. And in electronics Sylvania's Lock-in tube has made an outstanding record. Proved indispensable in wartime Radio, Radar and Loran, this compact little ultra-high frequency tube has also contributed greatly to the success of

FM broadcasting. Now, the Lock-in, with its trouble-free simplicity, extreme strength, and unique "lock-in" connection, fills an important need in business, commercial and industrial electronic devices.

Whether you use, make, or repair electronic equipment—look into this Lock-in tube. You're sure to find unsurpassed quality, superlative performance in every way!

ELECTROFLASH . . . Electronically Revolutionizes Flash-Photography

Gives your picture-taking perfect uniformity. Replaceable Flash Tube provides 10,000 flashes of "daylight-quality" light for indoor photography. Ready to flash as often as every 15 seconds. Every photographic need is met by three models, all advances by Sylvania's electronic research.



SYLVANIA ELECTRIC

Sylvania Electric Products Inc., Executive Offices: 500 Fifth Avenue, New York 18, N. Y.
MAKERS OF FLUORESCENT LAMPS, FIXTURES, WIRING DEVICES,
ELECTRIC LIGHT BULBS; RADIO TUBES; ELECTRONIC DEVICES

Bidding for Power Unit

Symptomatic of the shortage in electric generating capacity is the spirited bidding by seven major utility systems for the floating 30,000-kw. power plant "Resistance," which is now being offered for sale by the War Assets Administration.

• Bidders are South Carolina Public Service Authority, Georgia Power Co., Pacific Gas & Electric Co., Union Electric Co. of Missouri, Southern California Edison Co. (which prefers to lease rather than buy), Louisiana Power & Light Co., and Public Service Co. of New Hampshire. Their bids range up to \$2,500,000. Four foreign nations, Greece, China, Belgium, and Eire, also are bidders for the power plant.

industry were stressing power conservation, when distribution system extensions were based on military and essential civilian needs, when new appliances were practically nonexistent.

• Too Successful?—With the end of the war, the utilities geared their sales promotion to "Lights on," strove hard to unsell electricity conservation (BW—Jan. 5 '46, p. 74). Now they're beginning to wonder if their efforts to build up a nonindustrial load to offset the anticipated postwar drop in industrial load hasn't succeeded too well—or at least too quickly.

The power problem in the larger cities probably won't be too pressing; but in the smaller towns, many of them dependent upon their own municipally operated plants or along the fringes of the big privately and publicly owned systems, power may be scarcer than at any time during the war.

• Consumption Gains—Power demand is rising rapidly, the result of both an increasing number of customers and greater consumption per customer.

In the first six months of 1946, the number of customers increased 1,117,069 to 35,148,142. Domestic customers rose 864,736 to 28,981,734, rural 69,420 to 1,303,861, commercial and small industrial 174,974 to 4,573,158.

Concurrently, average annual consumption per domestic customer has risen from 1,229 kwh. to 1,290 kwh.

If the industry continues to add domestic customers at the rate set in the first half of 1946, there will be a record 1,600,000 such new connections made during the full year. The previous high was 1,500,000 in 1924, which occurred during the home-building boom of the early 1920's.

• New Capacity Lags—Utilities are adding power generating and distributing

NOW YOU CAN PUT A
WATERFOIL
 "RAINCOAT" ON YOUR BUILDINGS

before



after



Have you a property investment that looks shabby?

Does it show the ravages of time and weather? You can put a "raincoat" on your building now that will restore and decorate it like new. The "raincoat" is Waterfoil . . . a scientific contribution of the Horn Laboratories to masonry protection. Waterfoil is manufactured of irreversible inorganic gels. It bonds chemically and physically to the masonry surface forming a hard dense coating. Waterfoil lets the masonry breathe, yet impedes water absorption inwards so as to prevent reinforcing bar rust and spalling. Write for the literature on Waterfoil today.

A. C. Horn Company, Inc.

Established 1897

SUBSIDIARY OF SUN CHEMICAL CORPORATION

Manufacturers of Materials for Building Maintenance and Construction • LONG ISLAND CITY 1, N. Y. • Houston, Texas • Chicago, Illinois • San Francisco, Calif.

The DALLAS Southwest \$13,000,000,000 FORTIFIED Market

Six-foot Harold Burns is 24, tips the scales at 175. He spent three years in the Navy, landed with the first attack wave at Okinawa. Now he's working in the shop of a sheet metal manufacturer in Dallas, his native city.

I'll make you a Top Hand mister

He's top-hand stock, and like his native born ancestors he's proud of the way he earns his salt... by giving a full day's work for a full day's pay. To him his job is his opportunity. He's proud of the man he works for, gives him loyalty that can't be bought with money... and when he has a problem or a suggestion he talks eye-to-eye with the boss.

That's why the boss likes and respects him... likes to sit by him at the ball park, go fishing with him Saturday.

He's been well trained in industry by white-hot war production. He likes it and he's eager to learn some more. He's real American top-hand stock.

There are 16 million of these native born Americans in the Dallas Southwest. That's one reason this region produced a great deal more than its quota of war materials when America needed them most. Set up your business in this strategic center, where mild climate lowers operating expenses and housing costs—encourages healthful outdoor recreation that brings clear heads back to work on Monday morning bright-eyed and rarin' to go. Your production problems are few and far between in the Dallas Southwest, region of America's top hands.

PRODUCTION EFFICIENCY YARDSTICK

Dallas workers produced trainers, fighters, bombers at a lower man-hours cost per pound of airframe than any other aircraft workers—anywhere. Similar production records can be furnished by many other Dallas industries.

Send for the 64-page report "The Dallas Southwest", which gives facts and charts that show why this amazing region is able to set world records for production... available to executives requesting it on their letterheads.

DALLAS CHAMBER OF COMMERCE, DALLAS 2, TEXAS.



FACADE WITH A FLOURISH

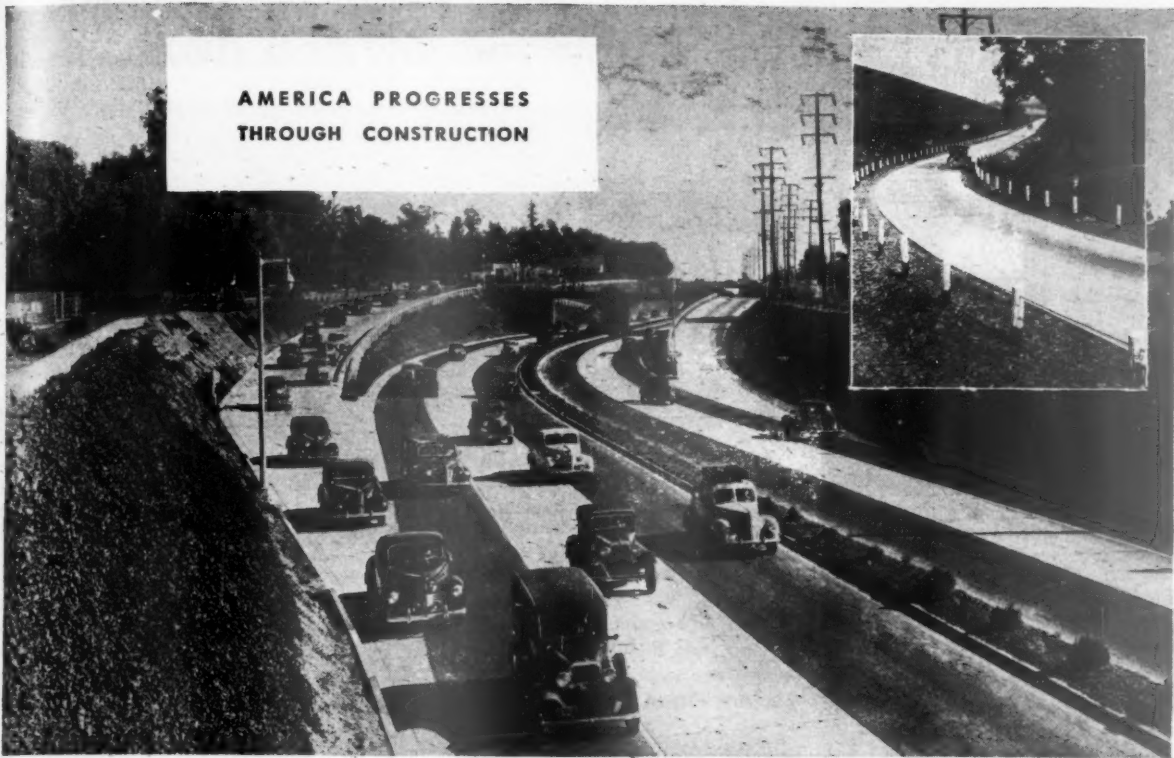
Attention-getter on Philadelphia's Market St. is the towering facade of the Grayson-Robinson chain's newest unit. Replacing an old five-floor front, the new face is of concrete set with 818,900 pieces of glass mosaic, has a neon sign with a 32-ft.-high first letter, batteries of mercury vapor lamps to floodlight its 5,694 sq. ft. The shop has two sales floors for popular-priced women's apparel and accessories.

capacity much more slowly than they would like. Equipment and materials shortages have hampered them; necessity for replacing worn-out equipment has offset much of the capacity that has been built. Installed capacity in the United States on June 30 came to 50,160,191 kw., which is only slightly more than the Jan. 1 figure of 50,102,442 kw.

For the full year, private utilities expect to add 1,232,661 kw. of generating capacity; their 1947 goal is 2,420,750 kw. By 1948 the figures will be even higher.

Meanwhile, there is a growing tendency to recognize the seriousness of the situation in many areas where it may be critical. The Bonneville Power Administration, which expects a three-year shortage in the Pacific Northwest, has notified its private utility customers that peak loads of 1,067,000 kw. are absorbing practically its entire capacity, and has warned them they should make

AMERICA PROGRESSES
THROUGH CONSTRUCTION



Modern Highways Serve the Public Better Than Ever Before

MODERN highways handle greater volumes of traffic at higher speeds with greater safety. Methods developed by the construction industry have made these improvements possible.

In the twenties, for example (see small insert above of 1920 highway), highway engineers designed roads with 16-foot pavements which required only about 3,000 cubic yards of excavation per mile. Safety at greater speeds today usually requires 24-foot pavements for two lanes, and earth-moving has increased 20 to 30

times. Improved methods have made possible wider and heavier pavement, fewer and lower grades, fewer and broader curves, and more structures to ease the flow of traffic.

Today the public is served better than ever before by its new highways. Developing the efficiency and economy from which the public benefits is one of the functions of the construction industry. Highway contractors of skill, integrity and responsibility are identified by the A.G.C. emblem.



This advertisement is No. 9 of this series

THE ASSOCIATED GENERAL CONTRACTORS of AMERICA, Inc.

Ninety-Seven Branches and Chapters Throughout America
National Headquarters — Munsey Building, Washington 4, D. C.

SKILL, INTEGRITY AND RESPONSIBILITY IN CONSTRUCTION OF BUILDINGS, HIGHWAYS, RAILROADS, AIRPORTS AND PUBLIC WORKS



Kimbrough Towers, a 96-family architectural concrete apartment building in Memphis, Tenn., was completed in 1939. It was designed for John F. Kimbrough, Jr., realtor, by H. M. Burnham, architect, and H. B. Hulsey, associate architect; Gardner & Howe, structural engineers; S. & W. Construction Co., contractors (all of Memphis).

Apartment Buildings of Architectural Concrete

for fast, economical construction of housing facilities

CONSTRUCTION of well-designed, and soundly built apartment buildings, offers an economical way to provide adequate housing facilities without danger of creating future slum areas.

Architectural concrete meets every essential requirement, including firesafety, attractive appearance and economy, for apartment buildings, hotels, schools or hospitals.

This construction is economical because concrete combines both

architectural and structural functions in one firesafe material.

The rugged strength and durability of concrete buildings keep maintenance cost at a minimum, giving many years of service at consistently low annual cost.

Experienced members of our technical staff are available to assist architects and engineers in obtaining maximum structural advantages of concrete for apartment buildings or any project involving the use of concrete.

PORTLAND CEMENT ASSOCIATION

Dept. 9b-12, 33 W. Grand Ave., Chicago 10, Illinois

A national organization to improve and extend the uses of concrete
... through scientific research and engineering field work

ready their reserve steam-driven generators.

• **The Temporary Boosters**—Jacksonville, Fla., which has been renting a 30,000-kw. floating power plant built for war purposes, has purchased it from War Assets Administration to assure adequate power until new land stations can be built. In Arizona, where severe drought has cut into hydroelectric output, the Salt River Valley Water Users' Assn. has rented a 10,000-kw. power train from the Navy and tied it in with its system at Tempe, Ariz. Elsewhere in the country, hydro output is falling below that of last year because of lowered water supplies.

Claude Wickard, head of the Rural Electrification Administration, is frank to admit the seriousness of the situation. Last week he reported that 432 of 835 energized REA-financed systems are unable to supply all the power needed by present consumers. Major trouble, he said, is that rural people are using more power than the distribution systems were designed to carry. Improperly located substations, and inadequate transmission systems and generating facilities were cited as other causes of unsatisfactory service.

• **Parallel Seen**—Wickard was talking about Rural Electrification Administration power co-ops. But his remarks apply as well to a good many private and public utility systems, as the customers in many a smaller urban, suburban, and rural region may come to find, to their sorrow, in the months that are to come.

NEW RADIO TECHNIQUE

International Telephone & Telegraph Co. last week demonstrated an improved and simplified version of its pulse time modulation (PTM) technique for taking care of a multiplicity of radio programs simultaneously over one radio channel (BW—Oct. 18'45, p19).

New transmitting and receiving equipment, less costly and less complicated than in earlier versions, presumably moves PTM much closer to commercial utilization for radio broadcasting, radio telephony, facsimile, and similar purposes.

The technique involves use of ultra-high-frequency pulses. Each of, say, eight radio broadcast programs is "sampled" thousands of times a second and the samplings sent out through the transmitter in sequence. At the receiving end, the samplings are unscrambled and emerge as the eight separate programs. Push button controls permit the listener to choose which one he will hear. Or separate loudspeakers could be set up to carry all the programs simultaneously if anyone wished to try such an arrangement.

Faith Baldwin has started her dreaming ...



... you've picked a perfect time to sell her, Gorham!*

SHE's young. She's vibrant. She's youth. And right now, within her sentimental mind, there lingers the tender refrain of a romantic tale by Faith Baldwin ... a story she has just read in *Cosmopolitan Magazine*.

Cosmopolitan's pages are the place you find the greatest emotional writing of our age—great writing that makes *Cosmopolitan* great reading. Here's writing that spins webs of dreams—that creates moods of warm emotion.

So now, Gorham, now that her eyes are soft with the stardust of Faith Baldwin's fine writing—it's time once more for your advertisements! Fly in on the wings of illusion! Give her dream clouds a silver

lining. Parade your smartest styles in Sterling before her eager eyes while they're still wide with inspiration:

She's just been carried away by the magic words of Ursula Parrott and Katharine Brush and Sinclair Lewis and all the other famous authors who appear in *Cosmopolitan*.

Her emotions have taken over, Gorham. And emotion makes wars. Emotion makes marriages. Emotion makes SALES!

**A Cosmopolitan advertiser since 1914*



Cosmopolitan

GREAT WRITING MAKES GREAT READING

LUMINALL the light-reflective paint

that is an important aid to

startling educational growth

in Texas Schools



BEFORE



AFTER



These results obtained

The Texas State Department of Health has announced that by relatively simple changes in existing schoolrooms it has given children 10 months' educational growth in 6 months, and other advantages as follows:

- 57.1% less refractive eye problems
- 90.1% less non-refractive eye problems
- 44.5% less nutritional problems
- 30% less signs of chronic infection

These changes in schoolrooms involved: (1) painting interior walls and ceilings; (2) fenestration; (3) seating. The work is supervised by Dr. Darell B. Harmon, Executive Director, the Inter-Professional Commission on Child Development.

Texas method is also applicable to many factories and offices

The achievements made in educational progress and the well-being of students in Texas public schools by simple changes in their environment has far-reaching significance.

The proper control and use of light in the Texas method includes painting walls and ceilings according to scientific lighting levels with Luminall paint. The resulting advantages are available to all schools and equally applicable to many factories, and workrooms.

"Painting for Light and Decoration"—

Of interest to owners and managers of factories, stores, schools, hospitals, offices, etc. Also Dr. Harmon's "Light on Growing Children" reprinted from Architectural Record. BOTH SENT FREE.

Luminall paint is highly light-reflective. It has been sold for years by leading paint dealers and millions of gallons now decorate the walls and ceilings of homes because of its lovely pastel colors, economy, and ease of application. Luminall paint is odorless. Dries in 40 minutes. One coat covers. For booklets shown below, address National Chemical & Manufacturing Company, 3608 South May Street, Chicago 9, Illinois.

"Short Course in Interior Decorating"—

A new 24-page booklet containing many full-color illustrations of rooms decorated with Luminall and much basic information on color schemes and harmonies. Enclose 10c.



LUMINALL

the light-reflective
paint for interiors

Steel Price Snafu

While OPA defers action to remedy price imbalance, output pattern is distorted by shift to high-profit items.

Because OPA is not expected to do anything about steel prices until mid-November at the earliest, it begins to look as though the existing imbalance in supply between different finished products is going to get a lot worse. Steel users who consume low-profit-margin items, such as nails, concrete bars, track accessories, and structurals of certain types, have had their allocations cut more and more as steel mills diverted their raw steel into other more profitable products, and the end is not yet in sight.

• **Price Rise Asked**—On Aug. 23, the General Steel Mill Products Industry Advisory Committee met with OPA



PRACTICING PEDAGOGUES

To bridge the gap between academic training and the practical problems of business, San Francisco's Golden Gate College, headed by Dean Joseph M. Trickett (above), will open a new school of business management in October with businessmen as instructors. Men in business or with two years of college training, and servicemen trained in handling men will be eligible. San Francisco businessmen suggested the idea to Trickett—himself a former director of organization planning for Columbia Steel Co.

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All staterooms outside, each with private bath . . . all passenger accommodations air-conditioned . . . outdoor tiled swimming pools . . . dining salons with wide picture windows . . . some of the many features of these new "Santa" Liners.

American comfort goes to sea..

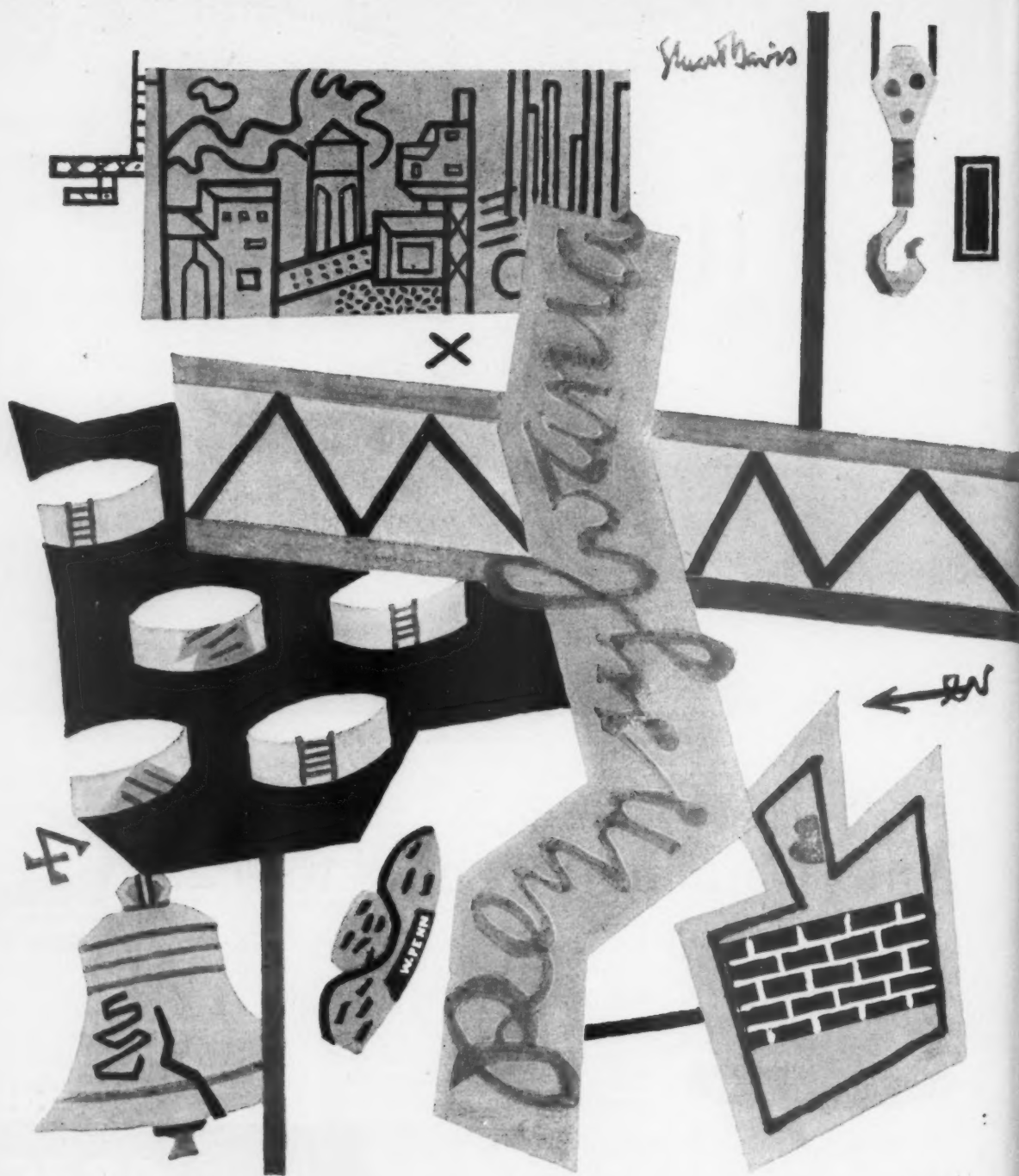


Today, American comfort in its most modern form goes to sea in Grace Line's nine new passenger ships,

which combine the luxurious accommodations of a cruise liner with exceptional cargo space and the most modern cargo handling equipment. These vessels, with the completely modernized Santa Rosa and Santa Paula, and nine fast new freighters, constitute Grace Line's new fleet of twenty "Santas", which will link the Americas with maximum efficiency.



See your Travel Agent or *GRACE LINE*, 10 Hanover Square or Rockefeller Center, New York; Pittsburgh; Washington, D. C.; New Orleans; Houston; Chicago; Detroit; San Francisco; Los Angeles; Portland, Ore.; Seattle; Vancouver, B. C.



Artist - Stuart Davis, native of Pennsylvania

PENNSYLVANIA—annual purchases: \$5½ billion—mostly packaged.

CONTAINER CORPORATION OF AMERICA



Save Waste Paper

vania

aper



THE SAGA OF YUCCA

New Mexico's state flower, the yucca (above)—which seemingly blooms into usefulness only during war years—is again under study as a source material for cordage, twine, and paper as a result of its World War II service. Its fibers were used by the Navy for a special paper. In World War I, about 80,000,000 lb. went into burlap and bagging. The plant has sparked interest in Florida, which seeks seeds for experimentation, and researchers in New Mexico are wondering whether the fibers might do for brooms, brushes, and wallboard binders. On the debit side against widespread yucca cultivation: The Southwest fears the soil would be robbed of cover, and no one knows how long it would take to grow a domesticated crop.

representatives to discuss the industry's request for a new boost in steel prices. Under the price law, industry-wide increases are required where ceilings do not reflect 1940 prices plus average increased cost. Since the industry's last \$5-a-ton increase, prices of pig iron and coke and freight rates on incoming raw materials have gone up.

Despite this, OPA at the Aug. 23 meeting asked the steel industry to submit additional data to support its request for further price relief, and the industry is now gathering such information. Since OPA has 60 days in which to act on requests for price increases, the industry figures that relief will not be granted before mid-November.

• **Bowles Slipped Up**—Some steel observers believe one reason that OPA's attitude toward the industry is less than cooperative is that the industry out-

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DEPT. W — SAN JOSE CHAMBER OF COMMERCE
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**SANTA CLARA
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The population center of the Pacific Coast

smarted former Administrator Chester Bowles on the \$5 price boost. Just before that boost, Benjamin Fairless, president of United States Steel Corp., maneuvered Bowles into saying that the increase would apply to alloy steel as well as carbon steel. When Bowles later found out, to his embarrassment, that OPA's metals division intended the boost for carbon steel prices only, it was too late to renege on his promise.

Result is that alloy steels are the most profitable items today, and companies largely concentrating on alloys, such as Allegheny-Ludlum and Carpenter Steel, are doing much better than the rest of the industry. Particularly hard hit are the nonintegrated companies which produce no alloy steel, since they cannot balance low-profit-margin items against high-profit goods which they do not produce.

• **Consumers Hit**—While most integrated companies manage to get along by diverting production into profitable items, this distortion of shipments is getting to be an impossible situation for many steel users. Builders of industrial projects, stymied for concrete reinforcing bars, have actually been buying alloy reinforcing bars costing a lot more.

Other projects are tied up for lack of nails and structurals, while production of railroad equipment has been hit by shortages of structurals and track accessories. OPA has had many protests, but has as yet taken no effective action to rectify the distorted relationship between individual prices.

• **No Scrap Rise**—OPA's decision this week not to grant a general rise in scrap prices for at least six months will not affect the petition for an increase in finished steel. Although an increase for scrap had been almost universally expected, the petition took no official note of it, since it had not been granted officially.

Actually, many mills are now paying more than ceiling prices for scrap in two ways: They are paying for extra freight by cross-hauling scrap from their customers on direct deals, and they are buying unprepared scrap and preparing it themselves.

ZONING STYMIES HOMES

The 1,000-home building project of builder Matthew H. McCloskey on the outskirts of Philadelphia (BW—Aug. 10 '46, p. 36) is stalled because it ran afoul of a Springfield township zoning law which provides that the minimum house lot on the two streets bordering the old Stotesbury estate shall be 12,500 sq. ft.

As a result, the promised September occupancy of the first group has been delayed and the \$8,800-\$9,800 price range must be increased to cover the additional cost of ground. The number



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of dwellings will drop well below the 1,000 mark, may get as low as 600, necessitating complete revision of plans.

McCloskey, who designed the concrete construction, has filed an appeal. To date, he has nearly 4,000 applications from veterans who want to purchase the homes.

Autos Lack Lead

Industry warns that its production will dwindle unless government acts decisively to make controlled metal available.

Seeking to loosen up the supply of lead, the Automobile Manufacturers Assn. telegraphed the Office of War Mobilization & Reconversion on Monday that unless decisive steps are taken at once the auto industry faces "radical curtailment or total stoppage of production within a matter of weeks" (BW—Aug. 31 '46, p. 21).

"Widespread unemployment" was described as the alternative to making more lead available. That metal was said to be in the shortest supply of any needed by auto companies today. Restoration of OPA controls, coupled with limitation of imports, was cited as the reason.

• **Supply vs. Demand**—Current lead demand is reported around 80,000 tons per month. Domestic production has averaged 25,000 to 30,000 tons, with a fourth of it set aside for government

allocation. Scrap flow has run well below normal expectancy of another 25,000 tons, the A.M.A. stated.

Remaining requirements would normally come from abroad. But the world lead price today is 10¢ a lb., while the domestic ceiling is 8 1/2¢. Consequently, foreign purchases by the government—only buyer which can import lead today—have been drastically reduced, according to A.M.A.

One cure, the auto group indicated, might lie in reestablishment of the 9 1/2¢ price which prevailed during the OPA suspension. In that period, marginal mines were in operation, foreign purchases were sold into domestic channels by Metals Reserve Co., and large stocks of secondary metal flowed onto the market.

• **Used in Batteries**—The largest automobile use of lead is in storage batteries. At a press conference last week, C. E. Wilson, president of General Motors Corp., said batteries were so short that in recent weeks the company had discussed shipping cars without batteries but had decided against it. Lead also is a fundamental requirement in production of solder used in radiators and body manufacturing.

AUTO PRICES UPHELD

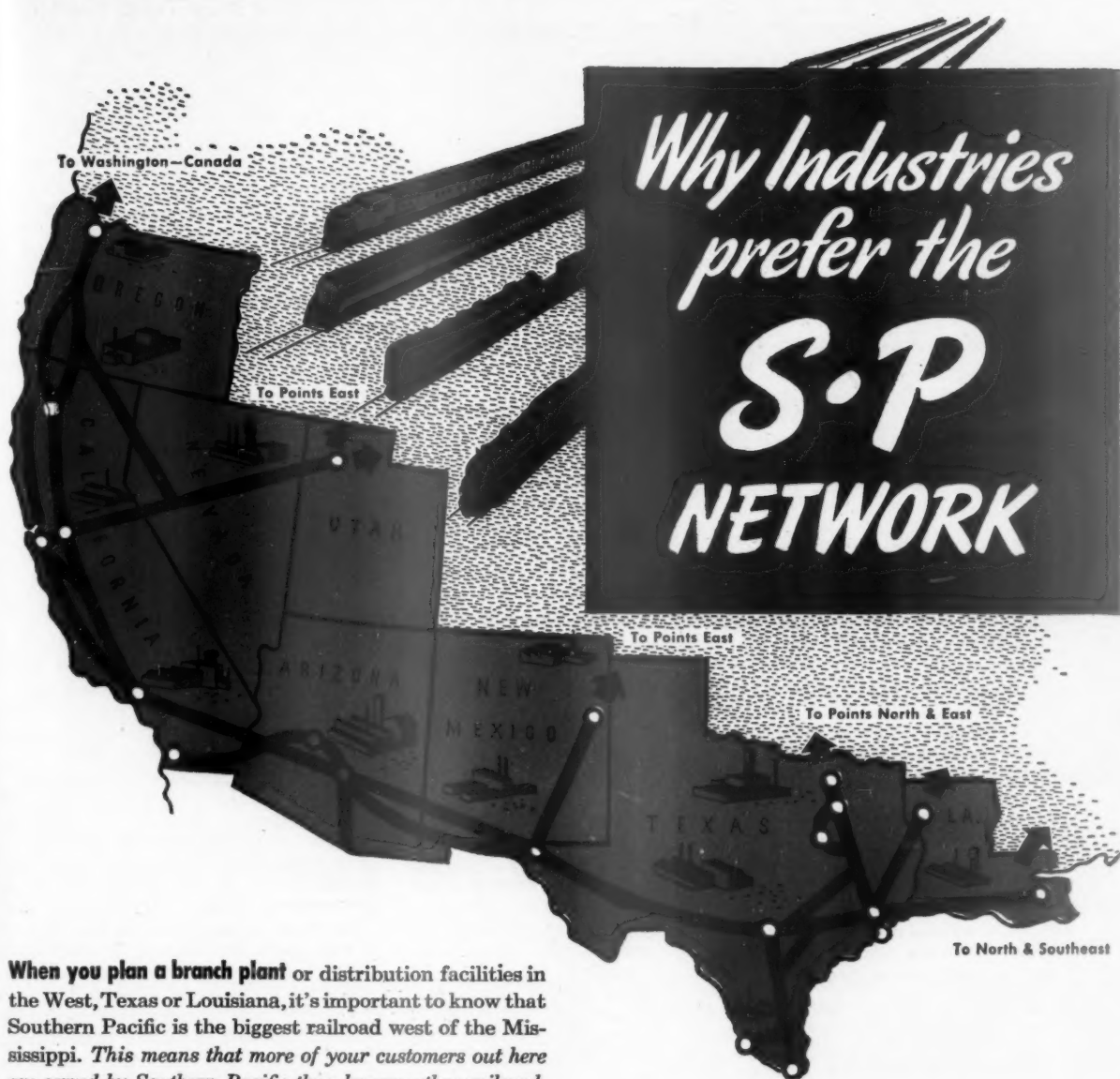
Official recognition in Kansas that auto ceiling prices are not necessarily actual prices was implicit in a recent ruling of Charles F. Hobbs, state insurance commissioner.

Hereafter insurance companies, in settling claims under full-coverage poli-



THEY WANTED TO BUY SOME SHEETS

The continuing textile shortage is exemplified by the hundreds of veterans who scrambled last week for bed sheeting and spreads at a War Assets Administration surplus sale in Brooklyn. Some waited all night; the first comer spent two nights in a chair to get a crack at the items for his dry-goods store. There was a bargain basement crush (above) when the sale opened, police were summoned as supplies dwindled, and many vets went home empty-handed.



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cies for loss of automobiles by fire, theft, or accident, must pay policyholders the actual cash value at the time of loss. OPA ceiling prices are not considered true valuation in many cases.

The ruling was the result of a number of complaints by policyholders that the insurance companies, in refusing to pay more than ceiling in settling losses, were forcing them either to replace lost vehicles with cars of poorer quality, or to make up the difference themselves.

Union Indicted

West Coast C.I.O. fishermen charged with coercing dealers into price-fixing contracts in violation of trust laws.

Efforts of organized fishermen to control the prices of their sea hauls—an important point in the Boston fishing strike earlier this year (BW—May 11 '46, p100)—last week moved into federal court in Southern California.

In a move that is being watched closely on all coasts, government investigators obtained an antitrust indictment against a C.I.O. union for alleged use of picketing and boycotts to wangle price-fixing contracts from dealers.

• **Coercion Charged**—The indictment, returned in the U. S. District Court at Los Angeles, named Local 36 of the International Fishermen & Allied Workers of America and 15 union leaders as defendants. All are charged with trying to coerce dealers into signing contracts which set prices on fresh fish at the maximum allowed by OPA, or which similarly control prices on all fish not subject to price ceilings. The government also charges that nonunion fishermen were prevented from fishing, and that through picketing and other tactics the movement of fish in trade was controlled by the union.

The C.I.O. fishermen are not employees receiving a salary or wage, but are independent operators of fishing boats. Since no employer-employee relationship exists between fishermen and dealers, government attorneys contend that no labor dispute is involved and the union cannot take refuge in the immunity written into the antitrust laws to protect labor's traditional collective bargaining weapons.

• **Precedent Claimed**—The union contends, however, that it also functions as a cooperative under the federal Fishermen's Marketing Cooperative Act of 1934, and it points for precedent to a 1943 federal district court decision in Portland, Ore., which dismissed an antitrust action resulting from a price-fixing dispute between a union and Columbia River salmon canneries.



Two Bricks... B & W Style

DILEMMA OF LONG STANDING in industrial furnace design and construction was this fact: the best materials to keep heat in the furnace would not withstand direct contact with blistering combustion gases.

So furnaces usually wore two coverings—a lightweight outside one to keep heat in, a heavy inner one to withstand the furnace temperatures! That called for two kinds of refractories... meant extra weight... extra steel to support it... extra labor to install... extra cost all around for furnace construction and operation... extra time for production.

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AVIATION

Sonic Trail Blazer Is Unveiled

Army Air Forces reveal some details of Bell's XS-1, plane that will be used for man's first flight into the speed ranges of sound. More than a decade of research is embodied in test craft.

Death of a pilot has given a setback to man's first attempt to project himself at speeds greater than sound.

When the P-39 fighter that Jack Woolams was flying to the National Air Races dived into Lake Ontario, Bell Aircraft lost its chief test pilot, the man who had been training for months for the job of piloting Bell's XS-1 into and beyond the sonic ranges.

• **Program Continues**—Although no successor has yet been named for the transonic flights, the plans that had been developed for Woolams will be carried out. Meanwhile, the Army Air Forces have partially lifted the veil from the first piloted sonic aircraft.

The XS-1 is the result of collaboration of Bell engineers with the Army and the National Advisory Committee for Aeronautics. The same pattern of industry, government, and military co-operation has been applied in a similar airplane project involving Douglas, N.A.C.A., and the Navy.

The aircraft are purely research planes, designed by the manufacturers on the basis of scientific data accumulated by N.A.C.A., with the Army or Navy acting as the procurement and evaluating agency. This pattern may also be applied in the operation of the \$600,000,000 Supersonic Research Center envisioned by the Army Air Forces (BW—Apr. 27 '46, p17).

• **Next Move**—The XS-1 has been flown as a glider in a preliminary test of its flight characteristics. Next step is to fly the plane and its pilot under the huge power of the compact rocket motor developed by Reaction Motors, Inc., of Pompton Plains, N. J. The 1500

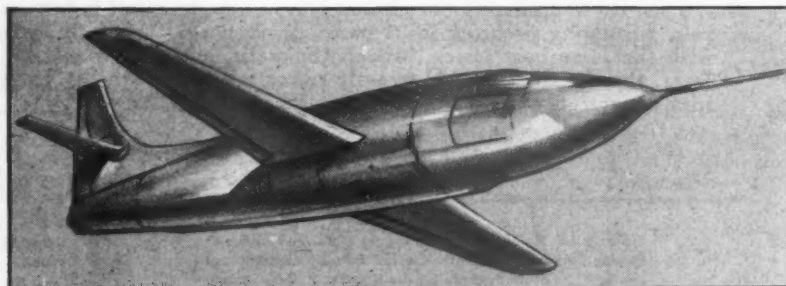
N4C engine has four cylinders, weighs 210 lb., and develops 6,000 lb. of thrust at sea level (BW—May 4 '46, p34).

The XS-1 is so heavily laden with rocket fuel and instruments, including elaborate recording equipment, that flight duration will necessarily be brief. It is hoped that the strange aircraft can be pushed far into, and perhaps through, the transonic range.

• **An Assist**—Because of its limited flight duration, the XS-1 will be assisted to its altitude by a specially designed B-29 bomber. Release will be effected by XS-1 pilot. Substratosphere conditions are most favorable to sonic flight speeds.

Since sonic speed varies with air density and other factors, it is usually discussed by engineers in terms of Mach numbers or decimal equivalents. Mach number 1 is the speed of sound, which is in the neighborhood of 750 m.p.h. under standard conditions. Transonic changes in air flow over a plane begin at about Mach number .8 and continue to about 1.2. Although the XS-1 is designed for Mach number .8, engineers plan to push it through the 1's range. Its designers believe that the first human excursion into this range will be less violent at high altitudes because of the decreased air density there.

• **Pressure Suit**—A specially developed pressure suit for the pilot provides protection up to 80,000 ft. Further protection is afforded by an ejector seat, to be used if anything unforeseen should happen in the transonic range. The seat unit is fired by a 37-mm. shell which has a charge of powder capable



An artist's conception of the Army's newest rocket-powered plane—the Bell XS-1—which is expected to reach supersonic speeds in excess of 1,500 m.p.h.



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PROTECTION BY EJECTION

More than 50 ft. up, a human "projectile" slides back down a 110-ft. "scale" after testing out a seat-ejection unit at Philadelphia Naval base. The ejector is one of the devices which the Navy, like the Army (BW—Jun.15'46,p20), has designed to safeguard pilots in jet and projected supersonic craft (page 48). An explosive charge catapults pilot and seat up to 100 ft. along the calibrated track to test human physical reaction to such an experience.

of accelerating the seat and pilot to 40 m.p.h. in a travel of 5 ft. When clear of the plane, a second charge automatically releases the straps holding the pilot, and ribbon parachute to the seat. At a predetermined altitude in the descent an aneroid opens the chute (BW—Jun.15'46,p20).

Flights of the XS-1 will climax more than a decade of preliminary studies in aerodynamics, most of which have been conducted by the Supersonic Research Division of the laboratories of N.A.C.A. • **Other Projects**—Other AAF development projects in the field of jet propulsion have been revealed recently. In the fighter branch is the 500-plus-m.p.h. Northrop XP-79B powered by two Westinghouse 19-B turbojet en-

gines. In this flying-wing design, the pilot lies in prone position to enable him to resist the bodily effects of high accelerations. The plane is only 14 ft. long, has a 38-ft. wing span, and is built mostly of magnesium. North American and Curtiss-Wright are developing single-engine jet fighters, the XP-86 and XP-87 respectively.

In the jet bomber field are the North American XB-45, Consolidated-Vultee XB-46, Boeing XB-47, Martin XB-48. The XB-49 by Northrop is a bomber development of the XB-35 Flying Wing.

Sea-Air Plea

Ship owners, denied air route certifications, point to foreign firms in U. S. market. CAB urged to alter policy.

President Roosevelt told the steamship companies that there was no room for them in overseas air transport. Today the Sea-Air Committee, pressure front for the National Federation of American Shipping, is still fighting White House opposition.

In 1942 a federal circuit court sustained the Civil Aeronautics Board's order that American Export Lines divest itself of control of American Export Airlines. Ever since then the board has rejected every ship-line application for a certificate to operate auxiliary air services.

Next week CAB will hold hearings on the Sea-Air Committee's petition that the board revoke its exclusion of maritime companies from the air over their world trade routes.

• **Prospect**—CAB has been the instrument of Administration foreign air policy. It recently certificated a flock of airline extensions to Latin America, not for needed carrying capacity, but for hemisphere solidarity. In like manner it authorized two heavy-subsidy runs to South Africa, to keep this government's foot in the door down there. Unless CAB turns on the White House—and its older members won't—or President Truman changes his mind under the weight of the Sea-Air argument, the shipping lines will again be refused.

American ship owners might weather the predicted 50% loss to air of their passenger business, which doesn't pay anyway. But many of those passengers happen to be their best freight customers. And ship men believe that, being human, customers will fall easy prey to foreign steamship lines which have glossy airlines under their control to use in sales promotion.

• **Competition**—Among steamship-associated foreign airlines already certificated to tap the rich U. S. traffic, the

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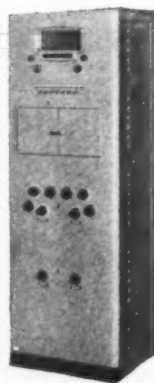
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Kindly send me, free and without obligation, a copy of your illustrated booklet, *How A Modern Sound System In Your Plant Will Make Money For You*, describing how the new Stromberg-Carlson Standard Sound System now available for plant and office use can help you.

Name: _____

Address: _____



STROMBERG-CARLSON

STRAIGHT-LINE  COMMUNICATION



Sea-Air Committee names S.I.L.A., 30% owned by Swedish American; D.D.L., extensively owned by five Danish ship companies; D.N.L., in which Norwegian ship operators own a substantial interest; and K.L.M., which the committee believes is partly owned by Holland-America and other Dutch lines. All of these except K.L.M. are members of Scandinair, the Scandinavian air transport association.

Air France and the French Line occupy the same traffic offices, but their relationship is not known to the Sea-Air Committee.

The British have not decided whether to permit ship-line ownership in British Overseas Airways Corp. The committee argues, however, that under European governments' control of both sea and air companies the effect is the same. British South American Airlines is admittedly owned by maritime operators, according to the Sea-Air Committee.

Five Chilean ship companies have formed an overseas airline and have asked their government to approve it.

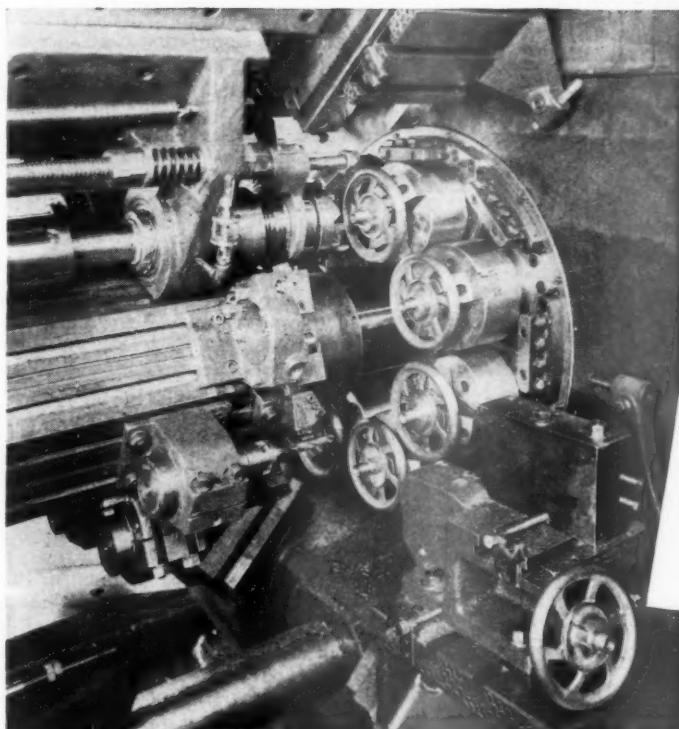
• **Potential Supporters**—The committee is trying to initiate mutual support by ship lines and domestic nonscheduled airlines which are now battling the CAB for less regulation and more flying. The barnstorming nonscheduleds, mostly veterans, are not brothers, even under the skin, of the staid shipmen. But singly or together they induced Secretary of Commerce Henry Wallace, whose Commerce Building happens to house both the Maritime Commission and CAB, to issue a strong statement urging CAB to let the nonscheduled operators cut into more of the regular airlines' traffic.

The maritime companies do have a speaking acquaintance with nonscheduled flying. Two of them are in the business. Matson Navigation Co. has a DC-4 (converted C-54) in uncertificated operation between the Pacific Coast and Hawaii. In addition, its plant at Oakland, Calif., which maintained C-54's for Navy Air Transport Service during the war, is now employing about 850 workers in converting the same type of planes for commercial operators.

• **Useful Experience**—Waterman Steamship Corp., with headquarters at Mobile, Ala., has a DC-4 on contract runs to various points, and is operating three DC-3's and five Lodestars under an intrastate (Alabama) license. The object of both Matson and Waterman is, of course, to accumulate experience to be written into their applications for foreign route certificates. More persuasive, right now, are their statements that they have equipment ready to fly but are barred from doing so by CAB, while grounded travelers wail.

There is nothing to stop other ship

PRODUCTION MACHINES THAT *Sell Goods*



Example OF MODERN COST CUTTING

This sewing machine hand wheel, of cast iron, requires 16 operations for finishing. The entire job is done on an Acme-Gridley 6" RPA 8-Spindle Chucker in 44 seconds.

Carbide tipped tools are used for the forming and turning cuts.

Two machines do this job, and fourteen other important jobs, with a simple change of tooling. That's versatility—and economy.

Respect from the Sales Department has been earned, in many a business, by Acme-Gridley 4, 6 and 8 Spindle Bar and Chucking Automatics.

These truly modern production machines turn out precision metal parts FASTER. They help keep costs down—a highly important fact in these times of

advancing material prices and higher wage rates.

The result, for the Sales Department, is either a lower selling price, to attract business, or a better margin where selling prices are standardized. Your Sales Department is interested in having you get complete Acme-Gridley information.

The NATIONAL ACME CO.

170 EAST 131st STREET • CLEVELAND 8, OHIO

Acme-Gridley Bar and Chucking Automatics:
1-4-6 and 8 Spindle • Hydraulic Thread
Rolling Machines • Automatic Threading Dies
and Taps • The Chronolog-Limit, Motor Starter
and Control Station Switches • Solenoids
Centrifuges • Contract Manufacturing

cooperation

*...based on real
experience**

Size, shape, speed, load, controls, signals, clearances, building code requirements . . . these are only a part of elevator layout. Keeping up with all the details is no part-time job.

But in your city there is an office of the Otis Elevator Company established to provide this data so that you may avoid unnecessary work and expense.

There is nothing new about this advisory service. It has been going on since Elisha Otis invented the first elevator almost a hundred years ago, since "Escalator" became an Otis trade name at the turn of the century. Its results are seen in more than half the vertical transportation equipment in the world.

To Architects, Engineers and owners, "Otis" means prompt cooperation based on real experience. For the finest in vertical transportation tomorrow, call your Otis representative today.

** Otis offices in 245 cities have but one interest . . . to provide the best and safest elevator and escalator transportation possible.*



lines from acquiring more equipment and operating uncertificated foreign services—except, as the regular airlines quickly point out, that they want air-mail pay. This is handed out only with certificates.

• **Divisive Force**—Air transport threatens all surface carriers, but in the case of ship lines the challenge is to foreign trade, while in the case of rails it is domestic. That is the main reason why the railroads are not fighting beside the ship lines. They may join hands later but not happily, for if they both eventually get air auxiliaries, the shoreline can no longer stop their intrusion on each other's preserves.

Supporting its petition before CAB, the Sea-Air Committee concludes that the main issue is "overseas trade and a policy on air transportation which will best serve our economic and national interests." It tries to show that existing airlines have an unjustified monopoly on a new vehicle long since in the public domain.

SHRIMP BY AIR

Last year Wayne University, Detroit, announced successful experiments in shipping chilled, fresh fish in sealed Pliofilm packages, without ice (BW—Nov. 10 '45, p34). Now the same packaging is being used commercially in Detroit by O'Neil & Hoffner Co., distributors, for fresh shrimp flown daily from Biloxi, Miss., by Chicago & Southern Air Lines. Similar service will soon be available to distributors elsewhere.

The shrimp are cooled to a temperature just above 32 F, wrapped in Pliofilm and heat-sealed, and placed in an insulated box which was designed by Hinde & Dauch Paper Co., Sandusky, Ohio. The university's tests indicate that the temperature of the shrimp rises only about 7/10 of a degree per hour, when the outside temperature is 70 F.

AIR SERVICE TO IMPROVE

Heavy air traffic congestion along the eastern seaboard will be relieved, though not eliminated, this winter by addition of new airway facilities. Plans have been completed to increase installations of radio range equipment, to the point where four airways will be available between Philadelphia and New York, three between New York and Boston, and three between Washington and Philadelphia. There now are two between the first pair of points and one each between the others.

Civil Aeronautics Administration and airline officials, with representatives of the Army and Navy, met this week to work out details. CAA installs the equipment for the airlines' use. Most of the paper work is finished. Installation is expected to be completed by winter.

OPA CHECKLIST

General Orders

As an incentive to increased production of low-cost wool fabrics, OPA has increased ceilings across the board. However, the agency emphasized that the increases apply only to fabrics whose construction is identical with goods made by the same manufacturer in June, 1942. The increases average 10%, and are greatest in the lowest price brackets (Order 138, M.P.R. 163).

Price increases on woodpulp ranging from \$2.50 to \$11 a ton have been granted by OPA. On imported pulp, the increases are effective as of Aug. 8, 1946, when adjustable pricing was first permitted (Amendment 6, R.M.P.R. 114).

To encourage maximum production of redwood lumber for the housing program, OPA has increased the ceiling on average of \$2.60 per 1,000 b. ft. (Amendment 12, M.P.R. 253).

Manufacturers' and distributors' ceilings on venetian blinds have been increased—15% for steel blinds and 20% for wooden and fiber varieties (Order 18, Section 1499.159E, M.P.R. 188).

Many producer price increases have caused increases at higher levels recently, particularly as a result of the "retail absorption" provisions of the law. Last week OPA raised fishermen's ceilings on tuna 1¢ to 2¢ a lb. as a direct result of a price increase given to canners under another provision of the law—that the ceiling prices for canned fish be at least as high as 1942 average prices (Amendment 21, M.P.R. 579).

Decontrol

The following items have been suspended from price control:

A group of 21 construction materials considered nonessential to the housing program. These include: all industrial refractories not previously decontrolled; dry, flushed, and pulp color pigments, and cadmium pigments; calcimine; vitreous enamel frit; and ground or pulverized limestone for chemical, cement, and industrial uses (Amendment 49, Supplementary Order 129).

Gum and wood rosin of all grades, and products containing 50% or more by weight of these rosins (Amendment 52, Supplementary Order 129).

All cosmetics retailing at 25¢ or less per item (Amendment 51, Supplementary Order 129).

Wheat and rice starches used by commercial laundries and textile mills, wheat and rice sirups used as a substitute for sugar or for corn sirup, and wheat gluten (Amendment 54, Supplementary Order 132).

Packaging for
Your Future Sales

Gaylord
Boxes

Containers by Gaylord will assure you the advantages of correct functional design, adequate protection in shipment—and perfect color harmony for greater sales appeal and prestige.

Standard of the
Packaging Industry

Corrugated and Solid Fibre Boxes
Folding Cartons
Kraft Grocery Bags and Sacks
Kraft Paper and Specialties

GAYLORD CONTAINER CORPORATION

General Offices: SAINT LOUIS

New York • Chicago • San Francisco • Atlanta • New Orleans • Jersey City • Seattle • Indianapolis • Houston • Los Angeles • Oakland • Minneapolis • Detroit • Jacksonville • Columbus • Fort Worth • Tampa • Cincinnati • Dallas • Des Moines • Oklahoma City • Greenville • San Antonio • Portland • St. Louis • Memphis • Kansas City • Bogalusa • Milwaukee • Chattanooga • Weslaco • New Haven • Appleton • Hickory • Greensboro • Sumter

MARKETING

Botany Picks Its Markets

Worsted Mills resumes its long-range program of integration and selective distribution. Promotion and advertising will be closely coordinated. Cosmetic line will be expanded.

Three events at Botany Worsted Mills last week brought its 15-year program of integration and selective distribution to a focus:

(1) The company signed a new five-year contract with H. Daroff & Sons Co., Inc., Philadelphia clothing manufacturer. Combined with a similar existing contract which still has two years to run, it provides for Daroff's exclusive purchase of \$50,000,000 worth of woolen and worsted textiles during the next seven years, for men's clothing which Daroff will market under the mills' trade name, "Botany 500."

(2) Botany announced plans to channel its entire wholesale sales of fabrics for women's and children's clothing to 24 noncompetitive "cutters" (garment manufacturers) whose labels will feature the name Botany and whose promotion and advertising will be closely coordinated with Botany's.

(3) It released two additions—lipstick and powder—to its present line of Botany cosmetics, which, like the present lotion, soap, and creams, will be distributed directly to retailers by the company's products division.

• **Long-Range Program**—Though these are not postwar developments but a resumption of an interrupted long-range program, it is peculiarly appropriate that they come now on the heels of a war. For, profitwise, the American woolen industry had become a war-to-war business. In peacetime it was plagued by overproduction and the cut-throat competition that goes with it.

Botany's efforts to bridge that war-to-war profit gap by smart merchandising go back to 1927 when Col. (from World War I) Charles F. H. Johnson took over. He found \$18,000,000 in fabric inventories on the books, saw their value dwindle to \$6,000,000 almost before his eyes. Now, instead of following the former customary mill practice of producing fabrics and sending out "tag toters" (the colonel's word) to sell them, Botany's basic concept is to find out what customers want and make it to order. Instead of one-time-a-year inventory turnover, Botany now has about four-and-a-half times.

• **Merchandising Ideas**—But Botany's integration and selective distribution actually got under way beginning in

1931 when Charles F. H. Johnson, Jr., fresh from the University of Pennsylvania, and fortified with several summer vacations spent in first-hand study of European woolen mills and woolen marketing, settled down in the Passaic mill. He found little to quarrel with in its production, much in its merchandising.

By now, the story is well known of how "young Charlie" began making woolen ties out of some surplus challis whose inventory value had dropped from \$2 to 30¢ a yard. That was the start of Botany's integration program, which went on to include other consumer products made either at the mill or by outside firms to Botany specifications: men's bathrobes, men's sports shirts and slacks, men's hosiery, "No-Dye-Lot" knitting yarns, Botany Certified fabrics (yard goods), and Botany cosmetics whose base is lanolin recovered from Botany's wool processing. This fall women's bathrobes will be added.

All these products are nationally advertised and sold directly to retailers by Botany's own salesmen, through its products division whose sales this year are

expected to reach \$18,000,000—in contrast with \$12,000,000 on women's and men's wear fabrics sold wholesale. (Another \$5,000,000 in commissions for custom dyeing, processing, etc., brings the company's 1946 volume to an expected \$35,000,000.)

• **From 2,100 to 24**—So much for integration. What Botany now calls its Coordinated Selective Distribution plan began three years ago when it contracted to channel all its men's wear fabrics, formerly sold to about 400 cutters, to H. Daroff. Its new contract with 24 noncompetitive manufacturers of women's and children's garments—compared with about 2,100 accounts in the field a few years ago—completes the plan.

Each of these firms agrees to concentrate its buying of woolen and worsted fabrics with Botany, to include the Botany brand name along with its own on garment labels, and to do at least a specified minimum amount of advertising coordinated with Botany's and featuring the Botany name.

The 24—whose names will be released next week—are all manufacturers with established brands of their own, and who have shown a willingness and evidence of their ability to do the promotional job Botany considers essential to its C.S.D. program. Botany's own national advertising will feature name and products of these 24 customers. The company plans periodic "clinics" at which the 24 firms will put finishing touches on their Botany-coordinated lines for the coming season; first of these is scheduled for Oct. 2.

Retail prices of garments made under the plan will be moderate. Botany has no financial interest in its 24 customers



Botany's president, Col. Charles F. H. Johnson (right), and its vice-president and general manager, Charles F. H. Johnson, Jr., have teamed together to put over a merchandising program rare in the woolen business, beginning back in 1931 when "young Charlie" first converted surplus challis into neckties.



Botany's fair-haired model honors the lamb—the source of the company's woolen and worsted fabrics, and of the lanolin that is the base for Botany's cosmetics—including lipstick and powder introduced last week.

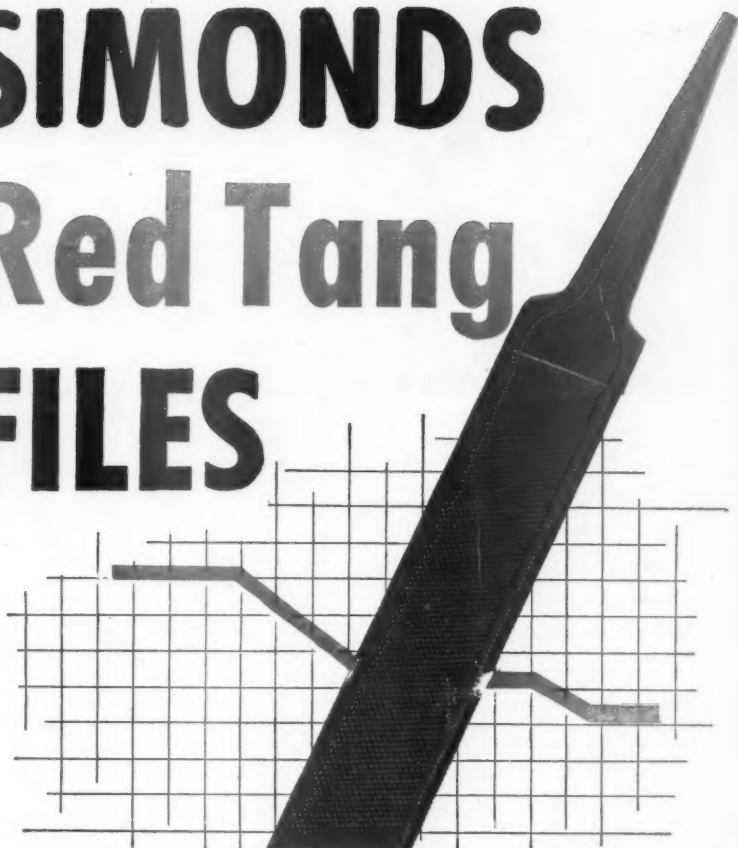
nor they in it. Contracts will run from season to season, and include a 30-day cancellation clause.

• **Calculated Risk**—Needless to say, Botany is aware of the potential pitfalls of selective distribution—chiefly that of putting all its eggs in one basket, and risking its own brand name, painstakingly and expensively built up over the years, with that of a few customers. But the 30-day cancellation clause is a hedge against deterioration of quality or any mutually unsatisfactory condition that might arise, and any excess production capacity left after these customers are supplied can, of course, be absorbed by the company's own products.

All in all, Botany thinks the hazards of C.S.D. are outweighed by the advantages: (1) a steady flow of fabrics for cutters, a steady market for Botany; (2) coordinated advertising that reduces consumer sales resistance, makes retailers buy more readily; (3) more nearly constant employment for Botany workers, in an industry which no longer can afford the traditional seasonal layoffs that discourage workers from entering it; and, perhaps most significantly, (4) coordinated planning between mill and cutter, the better to cope with the women's fashion market.

• **Fingers Crossed**—Col. Johnson, who has been in the business long enough never to uncross his fingers, sums it up a little grimly: "Even in today's market you can pile up an inventory quickly enough if you produce the wrong goods, and make the wrong guesses. Coordinated selective distribution reduces our chances of making wrong guesses."

SIMONDS Red Tang FILES



...they keep your File-Costs down

RED TANG FILES have the same basic tooth-design as Simonds Metal-Cutting Saws. So Red Tangs *cut*, instead of *scrape*... remove more metal with less elbow-grease. That's why workers like them. *And here's why YOU will like them:* They last longer... and deliver more and better work per file-dollar. Order Simonds Red Tang Files from your Industrial Supply Distributor, or from the nearest Simonds office listed below.



SIMONDS
SAW AND STEEL CO.

FITCHBURG, MASS.

Other Divisions of SIMONDS SAW AND STEEL CO.
making Quality Products for Industry

SIMONDS STEEL MILLS PITTSBURGH, PA. Special Electric Furnace Steels	SIMONDS GRINDING CO. PHILADELPHIA, PA. Grinding Wheels and Grains	SIMONDS TRANS-AMERICA CO. ST. LOUIS, MO. Simonds Products for Canada
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BRANCH OFFICES: 1350 Columbia Road, Boston 27, Mass.; 127 S. Green St., Chicago 7, Ill.; 416 W. Eighth St., Los Angeles 14, Calif.; 228 First St., San Francisco 5, Calif.; 311 S. W. First Avenue, Portland 4, Ore.; 31 W. Trent Ave., Spokane 8, Washington. Canadian Factory: 595 St. Remi St., Montreal 30, Que.



Whoever lifts...

In factory, service shop, warehouse, store or farm building, 'Budgit' Hoist electric lifting replaces dangerous and costly hand lifting.

Naturally the quicker, easier lifting is much more economical, often allowing one man to do the work of several. Because the worker no longer fears strains, rupture or over-fatigue, he devotes all his energy to the job—and is a happier and better employee.

There are no installation costs. Hang up, plug in—and use! Current usage is small. And maintenance expense is negligible!

The mechanical excellencies of 'Budgit' Hoists, their light weight and the trouble-free service they give makes them the ideal electric hoists for loads within their capacities.



Made in sizes to lift 250, 500, 1000, 2000 and 4000 lbs. Prices start at \$119. Write for Bulletin No. 371.



'BUDGIT'

Hoists

MANNING, MAXWELL & MOORE, INC.
MUSKEGON, MICHIGAN

Builders of 'Shaw-Box' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties. Makers of Ashcroft Gauges, Hancock Valves, Consolidated Safety and Relief Valves and 'American' Industrial Instruments.

Vertical Growth

W.T. Grant Co. adjusts to changed times by adding and enlarging lines. A time payment plan is scheduled for fall.

Anybody who has doubts about the passing of the limited-price store as a distinctive institution needs only to take a look at W. T. Grant Co.'s current merchandising explorations.

Like other pegged-price variety stores, Grant is obliged to adjust itself to a postwar economy characterized by higher consumer incomes, higher merchandise costs, and higher operating costs. And like others, it finds its most logical solution in vertical expansion (BW—Jul. 20 '46, p. 78).

Currently Grant's experiments in that direction take three forms: expanding former limited hard lines into complete lines; introducing small appliances and radios in about half its stores; and testing major appliances in two stores.

• **St. Paul Annex**—Grant has carried hard lines for years, but it limited itself until recently to best-selling, moderately priced items. In July it opened an addition to its St. Paul (Minn.) store in a connecting building consisting of one story, basement, and mezzanine. This annex doubled the store's total space, but gave hard lines three times as much.

In this new "Home Store," and in others, if the experiment pans out, the company intends to make its old, limited hard lines as complete as possible

In W. T. Grant Co.'s St. Paul store, automatic shotguns are among the new items added in the unit's experimental expansion into additional and more complete hard lines. Small home appliances (below) represent another of Grant's merchandising innovations.

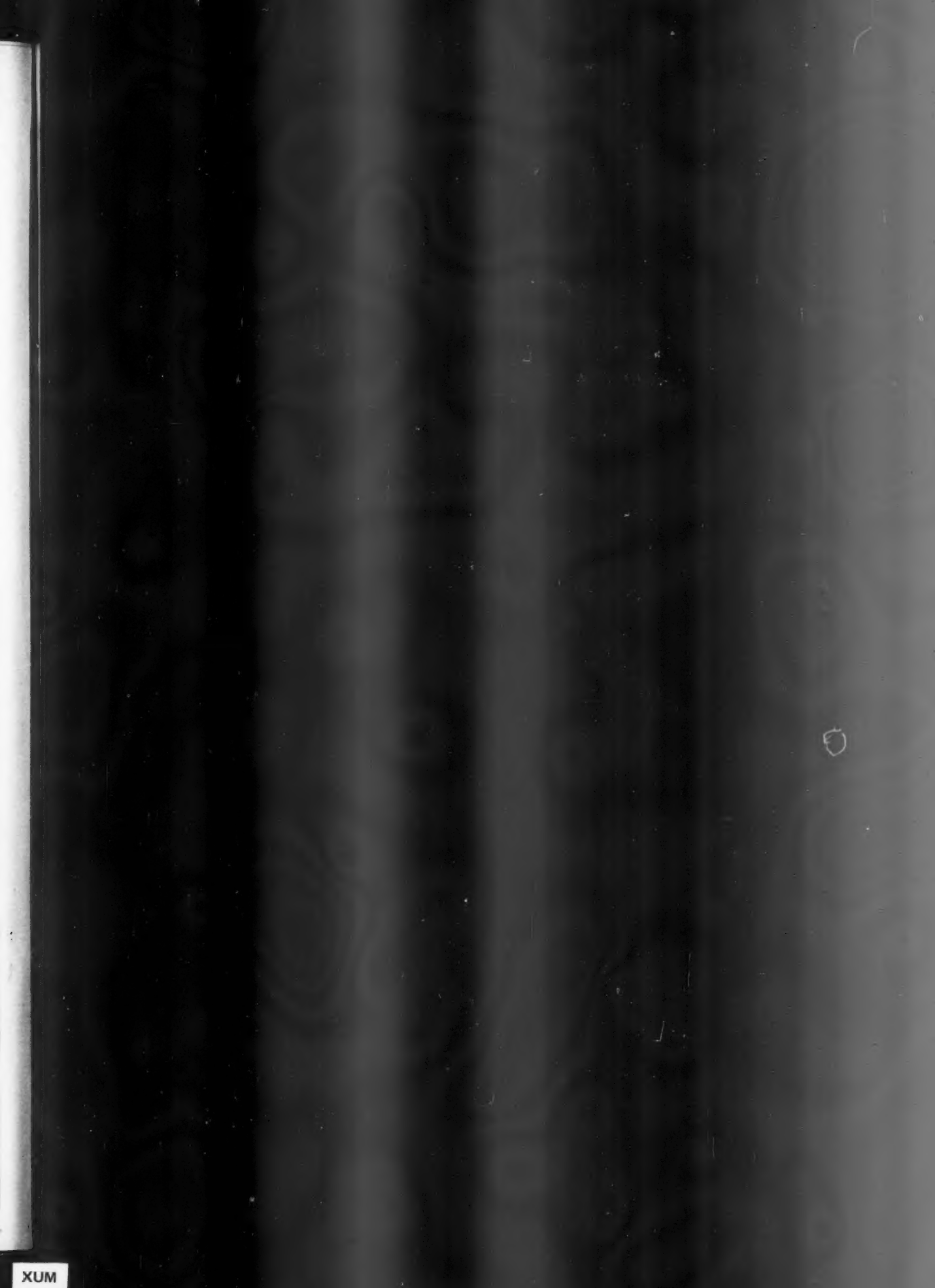
and to add new ones. The St. Paul unit boasts a full selection of hardware, paint, sporting goods, electrical goods, lamps and shades, furniture and home furnishings, rugs and floor coverings, housewares, gardening equipment, toys, and related merchandise.

• **In Sharp Contrast**—Items such as a \$133.50 power lawn mower stand out in sharp contrast to the 25¢ top price of the first Grant store, which was established in Lynn, Mass., in 1906.

The new St. Paul Home Store is also one of the 40 Grant units now carrying radios (table and portable models) and such appliances as toasters, irons, and mixers. Eventually about half its 490 stores will handle them. Both nationally advertised brands (General Electric, Westinghouse, and Knapp-Monarch among them) and the chain's private brands will be sold. So far, however, the only "Grantline" items are radios and record players. Grantline refrigerators and other major appliances are a likely future development.

• **Experimentally**—Grant is already experimenting with major appliances in two stores—Eric, Pa., and Atlanta, Ga. In Eric the department was ushered in four months ago with splashy advertise-





FORD TRUCKS LAST LONGER!



**More Ford Trucks in use today
than any other make!**

Registrations show it! Operators know it! Ford Trucks stay on the job for more years. This stretches the life of your truck investment. But this is only *part* of the profit-edge which Ford Trucks give you. You get well-known Ford *operating economy* and *low-cost maintenance*. You get time-proved Ford *reliability*. You get famous Ford V-8 *performance*—to speed up your hauling job. And Ford Service is everywhere. Ford Trucks out-number all others, because they stand up. Latest available official figures indicate that 78% of all Ford V-8 Trucks ever sold are still in use. See your Ford Dealer now.



ONLY FORD TRUCKS GIVE YOU ALL THESE LONG-LIFE FEATURES

100 V-8 horsepower—90 HP Six optional—triple-life Silvaloy V-8 rod bearings—Flight-light aluminum alloy, cam-ground, 4-ring pistons—crankcase ventilation—effective air- and oil-filtering—two-pump cooling—heavy channel section frames, doubled from spring to spring in heavy duty models—long-life rear axles with 3-bearing, straddle-mounted axle drive pinions and 4-pinion differentials—needle-bearing roller steering.

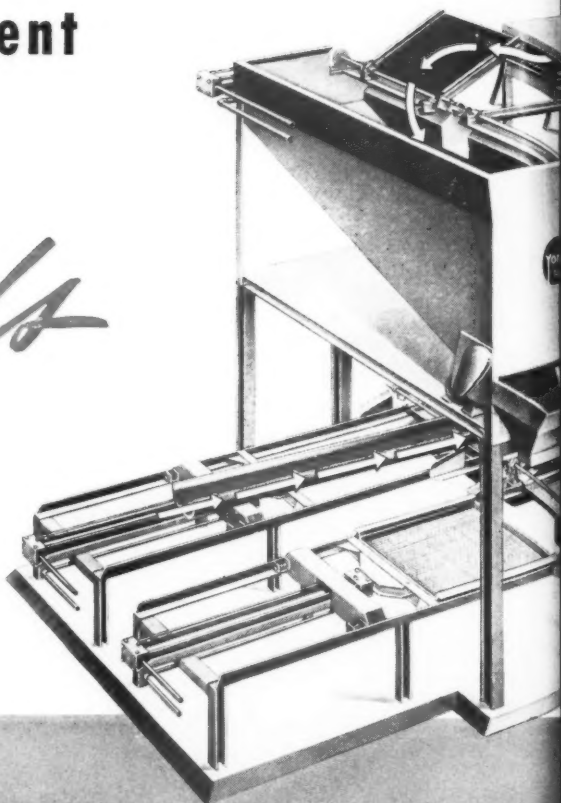


MORE THAN 100 CHASSIS AND BODY MODELS FIT OVER 95% OF ALL HAULING JOBS

It takes Science, Planning,
Experience and Equipment
to give you perfect

Frozen Foods

**Vegetables for freezing
must be PLANNED
before they are PLANTED**



The act of freezing adds no quality that a vegetable does not already possess. Hence, the food packer who is jealous of the high quality of his products and of his good name, builds his crops from the ground up. This accounts for the fact that not all brands of frozen foods have been of the same high quality.



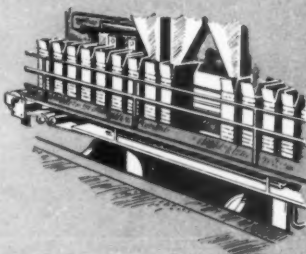
Modern quick freezing begins in the laboratories where soil chemists, plant biologists, government agricultural agencies and progressive farmers pool their knowledge to provide the perfect soil, the ideal seed strain, the most suitable fertilizer.

Harvesting of these thoroughbred crops is carefully calculated far in advance so that processing may begin within a few hours of harvesting, and on the very day the crop reaches the fullest development of food value and flavor.



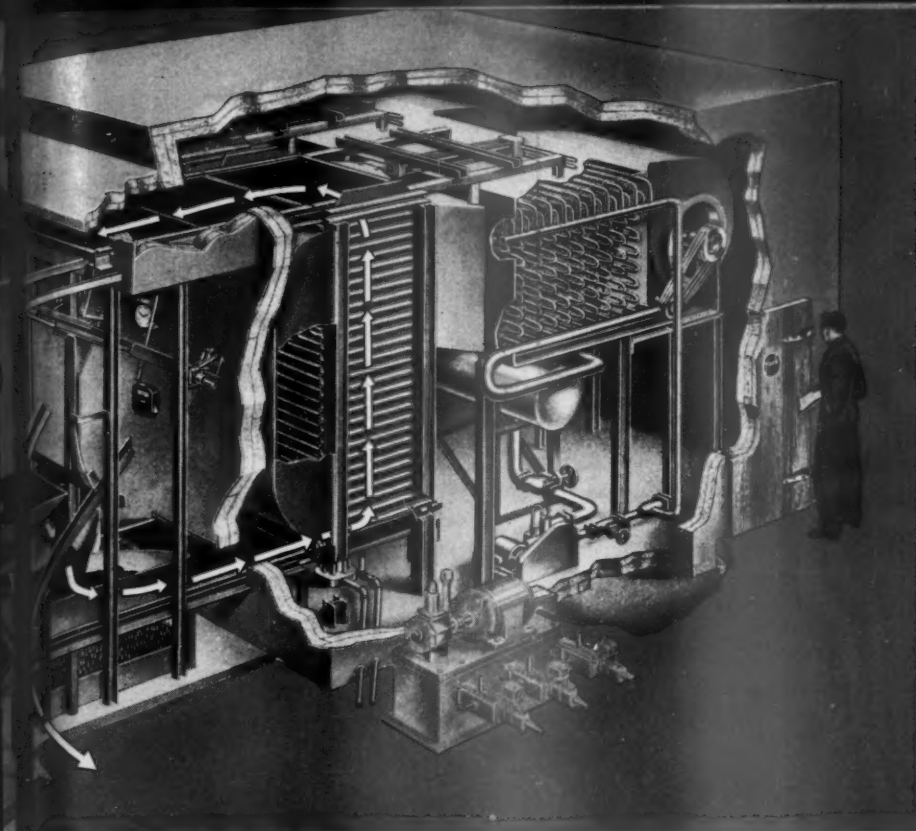
Enzymes, present on every bit of vegetation, and the cause of subsequent fermentation, must be arrested by precision-controlled blanching. Then, after grading, chilling and washing, the soon-to-be frozen food that was planned before it was planted, is finally ready for the freezer.

Many crops may be packaged either before or after freezing. Once frozen and packaged, they are rushed to refrigerated storage rooms, their full, fresh flavor imprisoned for the hour... weeks or months later... when they will appear on America's dinner table.



YORK





How It Works

In the center illustration the York Continuous Fast Freezer is shown processing peas in bulk.

After blanching, grading, cooling, washing, and inspecting, the peas float down the flume line at the extreme left and spill onto the sieve-bottomed freezer trays. The filled tray moves to the right under a plow that spreads the peas evenly on the tray. Still wet, the peas enter the insulated freezing chamber and the freezing column where they are quickly glazed with a thin coat of ice. Here, a hydraulic lift raises the tray six inches in the column, where it is held in position until the lift descends and rises again with the next tray, pushing the first tray further up the column which holds 40 trays in all.

As the 41st tray enters the freezing column, the top tray is pushed off the top of the stack onto the discharge conveyor track. Arms of the dump mechanism pick up the tray and empty it by slamming it down against the edge of the breaker bin. It is then swung back below the level of the discharge conveyor where it slides down the return ramp by gravity, ending up on the loading conveyor for a return trip.

As the frozen peas tumble down the inclined breaker bin, they pass onto gravity hoppers from which they are packaged and sent to storage.

In the case of peas, each tray has remained in the cold air blast of the freezing column for 51 minutes, a tray being added and one removed every 77 seconds. At this rate, the double column unit illustrated will process 7500 pounds per hour.

And here's the

YORK Continuous FAST FREEZER that will bring **THIS SUMMER** to your dinner table **NEXT WINTER**

YORK equipment is today processing more than half of the nation's frozen foods. And, as the advantages of this newer, faster, automatic freezing unit become known, more and more of America's quality food packers are turning to quick freezing for their top grades of produce.

QUALITY CONTROL is assured through *quick freezing action* that glazes the wet product, insuring

against loss of quality in freezing and storage...*flexible freezing cycle* permits timing of operations to the exact requirements of the crop being processed...*automatic operation* means complete sanitation since the product is untouched by human hands.

EFFICIENT OPERATION is assured through *complete hydraulic action* that means smooth action with a minimum of wear and tear...*compactness*

is seen in the fact that the vertical freezing column, occupying 16 square feet of floor space, provides the capacity of a 100 foot belt 4 feet wide...*hot gas defrosting*, often called "lunch-hour defrosting," is so rapid that the freezing column need not be unloaded.

And, of the utmost importance to everyone, the fact of *full automatic action* means lower prices for topgrade frozen foods. York Corporation, York, Pa.

Refrigeration and Air Conditioning

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885





Industries Thrive where *Railroads* Pave the Way

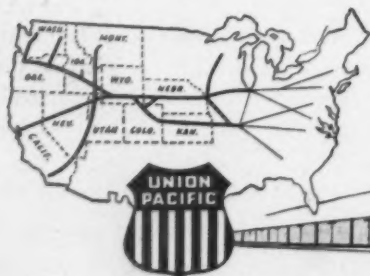


WITH the coming of the railroads, the western frontiers were conquered. They brought men, implements for building homes and towns, transportation for marketing products. Then factories were built. And industries thrived where railroads paved the way.

In the 13 great states served by Union Pacific, there

still is land to be tilled, minerals to be unearthed, livestock to be raised, room for new homes and industrial expansion.

Union Pacific will continue to serve the territory it pioneered, by providing efficient, dependable, safe transportation for shippers over the time-saving Strategic Middle Route.



be Specific -
say "Union Pacific"

★ Union Pacific will gladly furnish confidential information regarding available industrial sites having trackage facilities in the territory it serves. Address Industrial Dept., Union Pacific Railroad, Omaha 2, Nebraska.

UNION PACIFIC RAILROAD
The Strategic Middle Route

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DINING ROOM DEATH TRAPS—FOR GERMS

Bacteria have tough sledding in Blake's, Berkeley (Calif.) restaurant. Concerned over the reported volume of tropical disease carriers among returning veterans, Larry Blake—a GI himself—had General Electric germicidal lamps (left) installed right under the ordinary concealed lighting fixtures throughout the restaurant and in the kitchen—even over the garbage cans (right).

ing of radios, refrigerators, washers, and stoves and the news, "You can buy it and take it right home with you!"

Chief lines are Philco and Westinghouse, but other brand names include Apex, ABC, Sunkraft, Sunbeam, Estate, RCA, and Thor. Refrigerators range from \$187.95 to \$280; washers from \$64.50 to \$208.95 for a Westinghouse Laundromat; radios from \$24.25 to a \$205 Philco. Coffeemakers, vacuum cleaners, gas and electric ranges, electric irons, and record players—including a Grantline at \$32.95—are offered.

• **Outside Salesmen**—Both stores will have outside salesmen—considered a necessary appurtenance to big-ticket appliance selling. While today's market is no reliable indication of future sales, Grant expects that its proportionate volume on appliances will at least equal department stores' typical 5%.

Not the least revolutionary aspect of Grant's new program is the Time Payment Plan it will inaugurate this fall. But its experience so far seems to indicate there's no hurry. For the gala St. Paul Home Store opening, it made temporary arrangements for customers' purchases to be financed through local banks. The customers, however, responding to newspaper promotion, came running with cash in their hands and with no desire for credit.

SEARS REVEALS MEDIA

Sears, Roebuck & Co. last week announced that in 1945 newspapers got the lion's share—\$11,130,000, or 79%—of its advertising budget, as has been

the case ever since the company entered the retail field in 1925. Shortages of merchandise and newsprint prevented the newspaper appropriation from topping 1941's record high of \$13,087,780.

The balance of Sears' advertising budget was divided among other media this way: \$1,659,500 (12%) for circulars; \$927,000 (6%) for miscellaneous media such as billboards, road signs, direct mail, and special promotions; and \$439,000 (3%) for radio. In common with most mass merchandisers, Sears buys its advertising space and time at local rates.

GETTING AN FM AUDIENCE

Many a frequency-modulation radio broadcaster is frustrated these days by the lack of receiving sets in the hands of would-be listeners. Harry C. Wilder, president of WSYR-FM, Syracuse, is out to lick this problem by turning distributor for the duration of the shortage.

Wilder's FM station began broadcasting in July, but there are only a few hundred FM receiving sets in the Syracuse area. Determined to get an "adequate" FM listening audience within the next 60 days (5,000 by the end of 1946), Wilder is negotiating to buy sets from several small plants which manufactured military FM sets but have no peacetime distribution machinery for the sets.

If the sets pass tests by Wilder's engineers, Wilder will pay for them at regular distributor rates and turn them over at cost to local distributors, who

Look into
COLORADO SPRINGS
as the Location
for Your Plant



Center of rich, rapidly expanding Western market, with fast transportation facilities to all parts of America. Immediate supply of native skilled labor, friendly and cooperative. Abundant raw materials for every type of industry.

Low production costs. Low taxes, debt free city, low-cost fuel, power, gas, light. Pure water from Pikes Peak snowshed ... 310 sunny days a year. Choice sites available.

23 new industries in 23 months have located their plants in Colorado Springs—there's a reason!

New Manufacturer in Colorado Springs Impressed With High Type of Labor

"In going through numerous plants in Colorado Springs, I was impressed with the type of labor. Workers were clean-cut, intelligent, and of pioneer Western stock and were immediately available. This is one of the main reasons our company has recently set up a new plant in Colorado Springs."

R. R. WELCH, President
Welch Industries.



SEND FOR FREE BOOK

Available free to business executives is this attractive, colorful 24-page booklet. It gives you easily understood facts and figures of Colorado Springs' industrial advantages—specific information you will want to know. Send for your copy now.

MAIL THIS COUPON



Colorado Springs
MANITOU SPRINGS and the
PIKES PEAK REGION

Colorado Springs Chamber of Commerce
215 Pikes Peak Avenue, Colorado Springs, Colorado

Please send me your 24-page booklet, "Fit Your Plant Where You and Your Workmen Can Keep It".

Name _____

Address _____

AMERICA'S FINEST YEAR 'ROUND CLIMATE

Pre-Testing

IN EVERY
PHASE OF
PRODUCTION

ASSURES QUALITY IN EVERY SHEET

Pre-testing of Nekoosa Bond begins with a thorough check of the wood fibre which goes into the paper pulp... and ends with an examination of each finished sheet. Between these two inspections are many other tests... assuring you an unusually fine bond paper—smooth, crisp and white.

Nekoosa BOND
MADE IN U.S.A.

One of the complete line of Watermarked Pre-Tested Business Papers manufactured by the

NEKOOSA-EDWARDS PAPER CO., PORT EDWARDS, WISCONSIN



Machine "Sews" Nails In Wood*

THE WIDE-SPREAD use of this fine new precision tool for the wood-working industry will be made possible by manufacture of its close tolerance parts on an economical, mass-production basis. This machine feeds a spool of wire to precision-shearing knives which cut each nail and shape its point. An instant later, a driving mechanism hammers the nail home.

Such precision is our business here at Ericsson — has been for more than 35 years. We are glad to consult with manufacturers whose new designs are more effectively marketed with close-tolerance parts produced economically.

*The above machine is shown for its interest value. It is not manufactured by Ericsson.

ERICSSON
ESTABLISHED 1911



ERICSSON

SCREW MACHINE PRODUCTS CO., INC.
25 LAFAYETTE STREET BROOKLYN 1, N.Y.



will deliver them to local dealers. Distributors and dealers will make their normal profit; Wilder will get nothing but (he hopes) an audience for his station.

Once FM sets begin coming through normal distribution channels in quantity, Wilder will step out. Meanwhile, if he should overbuy he will distribute any surplus sets in the Albany-Troy-Schenectady area where his second station, WTRY-FM, is expected to begin broadcasting in about 60 days.

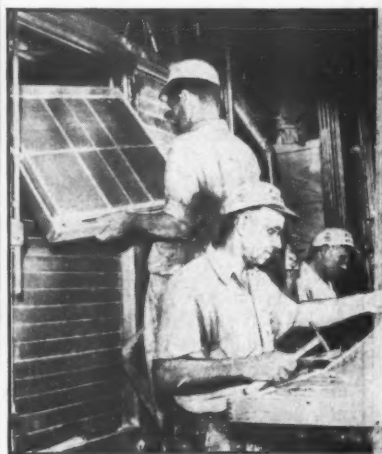
WHOLESALE MOBILIZE

In Washington this week the Council of National Wholesale Associations, a loosely knit federation, metamorphosed itself into a supertrade group to be called the National Assn. of Wholesalers.

Among the motives for this tightening up are two obvious ones:

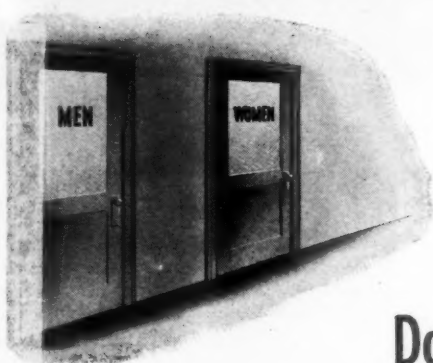
(1) Modern distribution trends (chain store selling, for example) tend increasingly to bypass the wholesaler, hence the need to organize to finance research into wholesaling techniques that may reduce costs in the traditional movement of goods from manufacturer to wholesaler to retailer.

(2) Wholesalers have always smarted under the notion of some consumers that they are merely middlemen whose profit increased the price of goods unnecessarily, and right now, with prices



SHORTAGE TO SURPLUS

With the bans lifted on "white" flour, workmen at a Minneapolis mill install fine mesh silk sifters as the coarser "Truman" flour went by the boards on Sept. 1. But what was good news to the consumer threatened to put the mills on the spot. Brown flour suddenly had no takers—until the government promised to buy up the supply—probably for overseas.



Don't underestimate the importance of these facilities in building good employee relations

YOUR washrooms are seen by practically every employee every day—and they have a direct bearing on employee morale. Clean, sanitary washrooms build good will and respect for your company. Repulsive washrooms breed vandalism—and are a menace to the health of all who use them.

Onliwon Washroom Service is used by many leading business firms because it contributes to good employee and public relations through neatness, sanitation and health protection.

Onliwon Towels, Tissue and Seat Covers, when dispensed from Onliwon Cabinets, give the user the assurance of safe, efficient service. The paper is touched only by the hands of the user, an essential sanitary requirement in public washrooms.



Onliwon Towels are strong when wet... dry without leaving lint... are pleasant to use... and only one does a complete drying job for hands or face. The Onliwon "wet strength" process and method of folding produce economies that make Onliwon Towels cost less to use than most lower priced paper towels.

A. P. W.

ONLIWON
WASHROOM SERVICE
builds better
employee relations



FREE—To executives whose responsibilities include building better employee relations.



This illustrated booklet... written with particular reference to women's washrooms... contains frank facts every employer should know. Please use coupon or make request on business letterhead.

Industrial Division, Room 103
A. P. W. Products Company, Inc.
Albany, N. Y.

Please send me, without charge or obligation, a copy of "What Management Should Know About Public Washroom Problems."

Name.....
Position.....
Company Name.....
Street.....
City.....
State.....



BAD AIR Invited

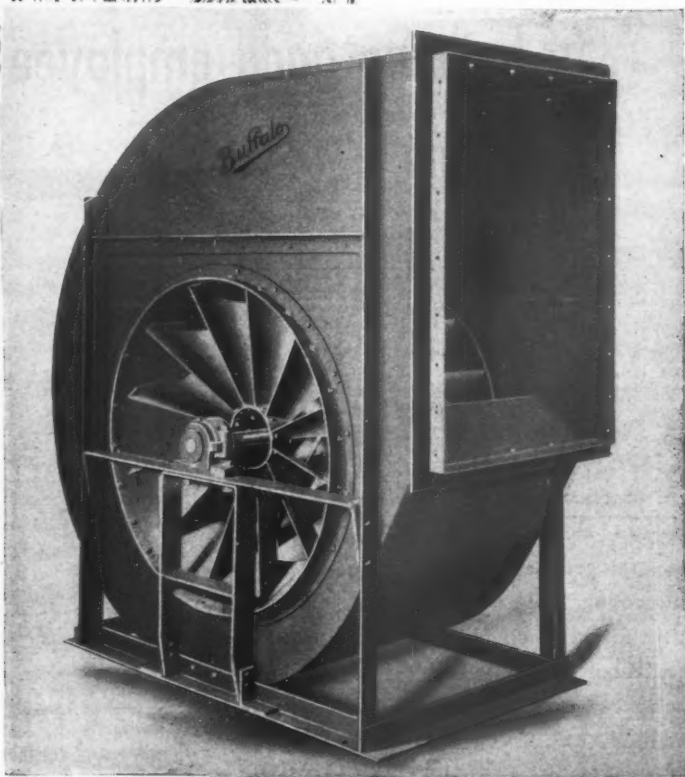
Lethal "GAOL" FEVER!

Horrible conditions in 16th century English prisons (including lack of ventilation) brought on the dreaded "Gaul" Fever. This disease struck down prisoners by the thousands... and was so contagious that prisoners on trial in the "Black Assize" at Oxford in 1577 communicated it to the 300 persons in court one day. All perished within 48 hours!

**PRESENT-DAY HEALTH,
ALERTNESS, EFFICIENCY**
Thrives on
DEPENDABLE, ECONOMICAL

"Buffalo"

VENTILATION



● Today "Buffalo" fans are a by-word in dependable ventilation for personal comfort, good health and wide-awake efficiency. Yet *one* fan cannot do *every* air job. That's why "Buffalo" has designed, built, tested and sold so many types and capacities. Whether your air application be exceptional or standard, there's a sturdy, practical, economical "Buffalo" fan to handle it! Why not call a "Buffalo" representative *now* for expert advice in solving your air problem *scientifically*?

BUFFALO FORGE COMPANY

458 BROADWAY

BUFFALO, N. Y.

Canadian Blower and Forge Co., Ltd., Kitchener, Ont.

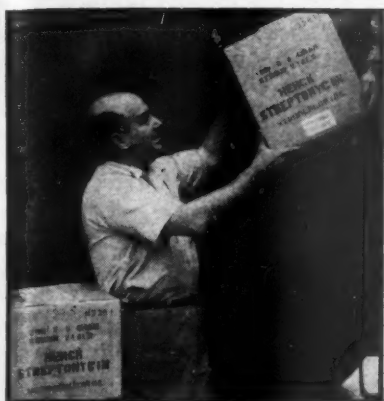
"Buffalo"

FANS

FOR VENTILATION

R!

English
through
disease
...and
trial in
mmuni-
ne day.



FOR HEALTH

Streptomycin, one of the remarkable drug discoveries of the war, is now more readily available for civilians and is being distributed (above) to 1,600 hospitals selected as "supply depots." Although producers have boosted output, the supply is still limited. But under the Civilian Production Administration's new program physicians are able to obtain the drug through local hospitals together with all data on dosage, and—to conserve the supply—what it will and won't cure.

rising sharply, they feel they are getting an undue share of the blame; hence this anxiety to educate the public to a better understanding of the wholesaler's true function.

Other avowed aims of N.A.W. are to participate in conferences and hearings that affect their welfare, examine proposed national or state legislation concerning them, and seek to correct purposeful or unintentional misrepresentation of wholesaling.

P. S.

Meyer Jewelry Co., Detroit credit house, offers to deliver customers' purchases by air in its own Cessna plane to Michigan cities with airports, to assure delivery within 24 hours after the order is received.

The St. Louis Post-Dispatch, which claims to be the first newspaper to print comic strips in colors, back in 1894, is now printing its Sunday comic section by rotogravure.

Wm. Wrigley Jr., Co. is eking out dealers' September quotas of Spearmint gum with Juicy Fruit, because of inadequate supplies of spearmint oil. Production of Juicy Fruit was discontinued during the war because it requires an undue amount of sugar, and the brand is getting its first advertising campaign in 25 years.



A STORY TO MAKE YOUR HAIR CURL

American women are generally acknowledged to be the best-groomed women in the world. They spend millions to achieve the reputation.

But fifteen-dollar "permanents" every few months are out of reach of some budgets. There's a big market for an easier and more economical way to make milady's hair curl. Several manufacturers are cultivating that market with cold wave sets that include hair curlers made by Twitchell from a kraft fibre twisted to give the exact pliability and stiffness needed.

This is but one of the hundreds of industries relying on Twitchell to improve the quality of their products, speed up manufacturing, or solve production problems.

For a better tomorrow, get in touch with a Twitchell man today about the many advantages and economies of using Twitchell custom-processed products. Call your secretary now and send a letter to E. W. TWITCHELL, INC., Third & Somerset Streets, PHILADELPHIA 33, PA.

TWITCHELL

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FOLDED
PRESSED
CRUSHED
SHAPED
BRAIDED
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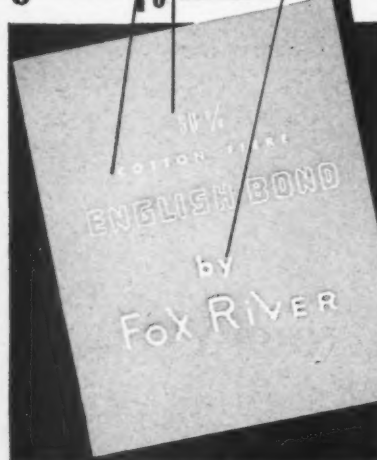


in letterhead paper—

THE WATERMARK IS YOUR
quality guarantee

BE SURE
IT SAYS
3 THINGS

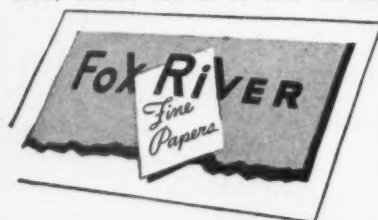
- 1 Does It Contain Cotton Fibre?
- 2 How Much Cotton Fibre?
25%-30%-75%-100%
- 3 Who Made It?



● Watermarks are letterhead paper trade marks. To see a watermark distinctly, hold it to the light. It should reveal what the paper is made from... the finest papers are made from cotton fibres. Further, the watermark should reveal the exact cotton fibre content... the more cotton fibre, the better the paper. Finally, it should reveal who makes it... like Fox River — makers of fine cotton fibre papers since 1883.

● Ask your printer, lithographer or engraver about Fox River papers. He'll be glad to recommend the paper with the correct cotton fibre content for each business need.

BOND, LEDGER AND ORION SKIN PAPERS



FOX RIVER PAPER CORPORATION
421-1 S. Appleton Street • Appleton, Wisconsin

FINANCE

(THE MARKETS—PAGE 118)

Retail Empire Is Consolidating

Gamble and Skogmo expect that merger of far-flung interests under one top company—Gamble-Skogmo, Inc.—will send blue ribbon earnings still higher and improve over-all fiscal position.

B. C. Gamble and P. W. Skogmo, joint heads of the West's mighty Gamble Stores (BW—Jun. 17 '44, p. 97), retailers of everything from toiletries to farm machinery, entered the postwar period with comprehensive modernization and expansion plans.

New leases, in fact, have long since been signed which will permit the chain to enlarge many old stores. Additional units are constantly being opened, and properties have been bought on which complete new shopping centers will be erected.

The wide variety of goods handled is being constantly enlarged. And expansion of the chain's affiliated Dealer Stores is under way.

● **Adjustment Plan**—Currently, however, Bert Gamble and Phil Skogmo are much more interested in another phase of their corporate affairs. They are concentrating on the first comprehensive fiscal reorganization ever to involve their multitudinous retail store interests.

Under their adjustment plan (already approved by the directorates concerned and presented for stockholder perusal last week), they hope soon to merge into one giant corporation all the many prosperous merchandising units that have resulted from their initial business venture—the joint purchase on Gamble's twenty-second birthday of a small Fergus Falls (Minn.) auto agency in March, 1920.

● **Top Company**—In the deal the two have worked out—aided by Goldman, Sachs & Co. and Merrill Lynch, Pierce, Fenner & Beane, two prominent Wall Street specialists in merchandising securities—their present Gamble-Skogmo, Inc., is slated to emerge as the top company.

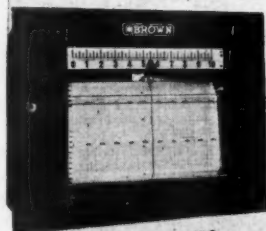
That corporation is already the biggest unit in the merchandising empire that Gamble and Skogmo, who had been boyhood friends in North Dakota, have built up in little more than a quarter century.

It now owns and operates 305 stores



SCHOOLED FOR BETTER BUSINESS

Studios savings and loan executives—like their commercial banking brothers—are in the swing again after a wartime holiday from school. At the University of Indiana, Fred Greene (above), president of Indianapolis' Federal Home Loan Bank, conducts a management class at the first postwar session of the Graduate School of Savings & Loan Associations, which this year enrolled 83 students. Prewar sessions were held at Northwestern University, Chicago.



BROWN
ElectroniK
CONTINUOUS BALANCE
PRODUCT CONTROL

"IGs" ARE EXPERTS AT SANDING THE GEARS!

WHERE quality is a prime consideration, continuous control of all steps in production is essential. It is also true that in such process control, "Industrial Gremlins"—those intangible trouble makers—always find fertile territory in which to operate.

These annoying and costly "IGs" take delight in "sanding the gears" in ways that often defy manual methods of detection and control. They upset temperatures, cause fluctuations in flow lines, produce erratic pressures, ruin uniformity, cause annoying delays, increase costs . . . Whether you manufacture glass or gasoline, metals or food products,

Brown ElectroniK instruments with "Continuous Balance" control can quickly earn their place in your plant. They have demonstrated uncanny ability to control processing variables from raw material to finished product.

Manufacturers and designers can get invaluable assistance on control problems from Brown engineers. A wealth of factual data and experience is available without obligation. Call our nearest office or write for information.

THE BROWN INSTRUMENT COMPANY, a division of Minneapolis-Honeywell Regulator Company, 4525 Wayne Avenue, Philadelphia 44, Pa. Offices in all principal cities.

INSTRUMENTS BY **BROWN** CONTROLS BY

FOR YOU . . . If you are not receiving "INSTRUMENTATION," the Brown quarterly magazine presenting case histories of control problems now being solved for industry, have your secretary send for it. No obligation.

BROWN
MINNEAPOLIS
Honeywell

What's DIFFERENT about a Californian?

..the way he dresses

Californians, living outdoors much of the time, wear clothes to fit this environment. Simple — providing the utmost physical freedom—colorful, informal, the clothes a Californian wears are as typical of the state as the snow-capped mountains and the sunny beaches.



...and the way he banks

Californians like informality in their banking, too. They go to the bank in their own neighborhood, a few blocks away. There, at the Bank of America branch they find the kind of banking service they prefer—friendly, convenient, unpretentious, and complete in every respect.

"The California Trend"

...a fact-based forecast... will help you plan your business if your plans include California. Write Dept. AD, 300 Montgomery St., San Francisco 20, or 660 So. Spring St., Los Angeles 34, for a free copy.

Bank of America, a member of the Federal Reserve System and the Federal Deposit Insurance Corporation, has main offices in the two Reserve cities of California—San Francisco and Los Angeles.

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NATIONAL TRUST AND SAVINGS ASSOCIATION

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BLUE AND GOLD BANK OF AMERICA TRAVELERS CHEQUES ARE AVAILABLE THROUGH AUTHORIZED BANKS AND AGENCIES EVERYWHERE

in 16 midwestern and western states. It supplies merchandise at wholesale to 1,381 independently owned and operated Authorized Dealer Stores in the same area. And it owns substantial interests in affiliated companies—19.9% of the outstanding voting stock of Western Auto Supply Co. (California) and a similar 41.8% interest in Gamble Skogmo, Ltd.

• **Larger Capitalization**—Under the readjustment plan, present capitalization of Gamble-Skogmo, Inc., will be drastically enlarged. Provided stockholders approve, as now expected, at special meetings on Sept. 26, it will emerge with \$1,230,000 of \$100-par preferred, \$11,998,530 of \$5-par voting common stock, and \$7,225,000 of debentures outstanding.

Slated for merger with Gamble-Skogmo, Inc., by an exchange of stock, are:

• **Gamble Stores, Inc.**—The supplier now, on a fee basis, of advertising, merchandising, display, buying, and management services for all Gamble-Skogmo, Inc., and Western Auto Supply (Calif.) stores. The holder, also, of 12.2% of the former's equity stock, 48.5% of all Western Auto's common, and 68% and 63.4% of the voting stock issued by Nasco, Inc., and the Solar Corp.

• **Western Auto Supply Co. (Calif.)**—The current operator (with subsidiaries) of 195 company-owned stores, and the wholesale supplier of 267 Dealer Stores, all located in eleven West Coast and Rocky Mountain states.

• **Nasco, Inc.**—A finance company which handles all the time sales of the Gamble-Skogmo group and a small amount of outside business.

• **Gamble Skogmo, Ltd.**—A Canadian holding company which owns all the common stock of MacLeod's, Ltd.

Destined under the new plan to be turned into wholly owned Gamble-Skogmo subsidiaries, also by an exchange of stock, are:

• **Solar Corp.**—A manufacturer of motor scooters, washing machines, storage batteries, varnishes, and paints at Wisconsin, Iowa, and California plants.

• **MacLeod's, Ltd.**—The operator of 31 retail stores, the wholesale supplier of eight Dealer Stores, all located in Saskatchewan, Alberta, and British Columbia, and the owner of a farm supply mail-order business.

A particularly valuable asset that would come to Gamble-Skogmo, Inc., in the merger would be Gamble Store's current holding of 143,500 shares of the common stock of Western Auto Supply Co. of Missouri.

The latter company, which has its headquarters in Kansas City and is in no way connected with Western Auto Supply (Calif.), operates one of the nation's largest chains of auto accessory



Bert C. Gamble (left) and Phil W. Skogmo, who parlayed an auto agency into a retail empire, are planning to tie their diverse interests into one big corporate package.

shops. It sells at retail and wholesale through 1,850 company-owned and Dealer Stores located in 37 states, and few of its outlets compete with Gamble-Skogmo units (BW—Sep. 22 '45, p. 92).

• **What Is Involved**—The stock in question represents a 19.1% voting interest in the Missouri company. Although carried in Gamble Stores' 1945 year-end statement at around \$51 a share, or at a book value of \$7,346,916, it has since sold as high as \$90.50 in New York Stock Exchange trading.

Whether this 19.1% holding actually represents technical working control is a moot point. However, Bert Gamble, appointed one of the Missouri company's five directors in 1945, was elected its board chairman in early 1946.

• **How Big?**—Exactly how large a corporation Gamble-Skogmo, Inc., will turn out to be if, as now expected, the merger is consummated has not been forecast.

On the basis of 1945 year-end figures of the group, however, its assets should total at least \$40,000,000. Working capital should come to more than \$20,000,000. And it is indicated that the company should start out with capital and surplus running in excess of \$24,000,000.

From the standpoint of volume, the company should prove equally impressive. Postwar sales are now running at an annual rate above \$110,000,000, compared with 1943's \$53,000,000.

• **Earnings Go Up**—Where profits of the group are concerned, 1946 has thus far proved a blue ribbon year. January-July Gamble-Skogmo, Inc., earnings, for example, were \$1,636,000 as against



"Does every man in the plant know just where and how to use it?"

There's not a second to waste when fire starts!

Workers must know . . . instantly . . . the right type of extinguisher to use—and the right way to use it.

They'll learn these things more quickly—remember them longer—if they *see for themselves* how fires are fought.

So . . . for your plant's protection, plan periodical demonstrations of fire-fighting methods. Be sure your workers understand what causes fires . . . what kills them. Why certain fires call for the use of one extinguisher; others for a different type. How to operate each of the various kinds of extinguishers used in your plant.

You'll find all the information you need for arranging demonstrations in the Kidde booklet, "How to Teach Fire Fighting." Why not write for a copy today?

Walter Kidde & Company, Inc., 925 Main Street, Belleville 9, N. J.

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★ For over 40 years Sly engineers have been solving all kinds of dust problems. They have been doing this longer than anyone else.

This long experience is reflected in superlative engineering resulting in dust control equipment which will operate most efficiently and most economically. Over 5,000 installations.

A Sly engineer will be pleased to discuss your conditions with you, to cooperate with your staff in a study of all vital factors—plant layout, operating conditions, hoods, piping, ventilation, filter, etc.—and to recommend the proper installation. Sly Dust Collectors are not expensive to install or maintain. They are a paying investment, saving thousands of dollars yearly.

Ask for Bulletin 98, 20 pages of useful information on Dust Control, and tell us your problem.



A typical Sly Dust Filter—heart of the complete dust control system.

THE W. W. SLY MFG. CO.
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\$944,000 for all 1945, and \$507,000 as against \$461,000 in the case of Gamble Stores. Western Auto Supply (Calif.) had profits of \$690,000, compared with \$359,000, and joint earnings of Solar, Nasco, and MacLeod's came to \$454,000, compared with 1945's \$381,000.

Gamble and Skogmo apparently don't think these earnings are just a flash in the pan. They expect that "initially" they should be able to pay 20¢ quarterly on the new \$5-par common "and, in addition, an extra dividend at year end."

• **Expectations**—Playing an important part in generating such expectations are the founders' hopes that the merger will prove especially beneficial to earnings.

Welding all the companies into one compact unit is counted on to expand the group's earning power through an increase in operating efficiency and a sharp cut in operating costs. It is also

expected (1) that it will strengthen the group's senior credit standing, and thus permit lower borrowing costs and more favorable future stock financing terms, and (2) that it will facilitate any future raising of equity money on satisfactory terms, because of wider distribution and broader market that will be obtained for the new common stock.

• **Without a New Issue**—The merger plan will require the sale of no new stock. And there is no indication that its successful completion will mean an early visit to the new issues market to float any "new money" issues.

Some cynical Wall Streeters, however, are frankly wondering whether the deal might not presage the subsequent public sale, in line with the current "inside selling" trend (BW—Aug. 17 '46, p57), of some part of the founders' large personal stock holdings.

Bear Markets: Their Length—and Their Damage

Wall Street dislikes nothing more than to be told by chart readers that a cherished bull market has finally been replaced by a bear market. That's why a sizable Street segment stubbornly challenges the many current claims that last week's decisive price break definitely indicates, under the Dow theory, that a bear market has been under way ever since the D.-J. rail and industrial averages reached new 1942-46 peaks late last

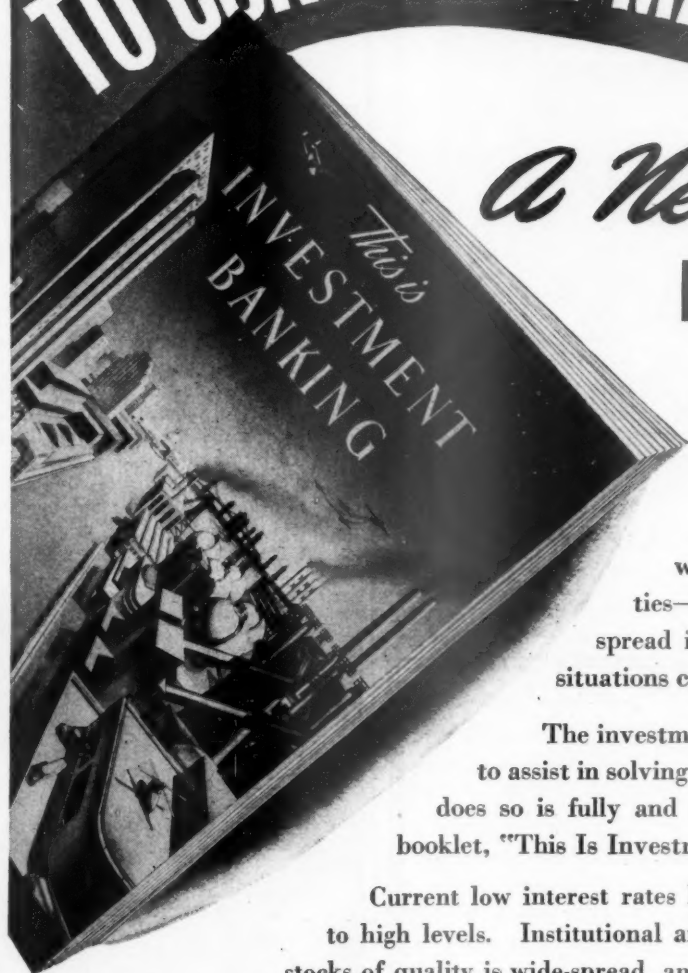
spring and at once started to retreat.

There is a valid reason for this attitude. Once the early flood of selling orders has been executed, a bear market normally means "hard times" in the financial district. Even if the chartists should prove right, however, bear markets aren't necessarily of long duration, nor do they always cause shocking price damage. This is made clear by a study of the bear markets of the last 47 years:

Industrials					Railroads				
Dow-Jones Index		Loss—Points %—		Weeks Lasted	Dow-Jones Index		Loss—Points %—		Weeks Lasted
April 1899	76.04				April 1899	87.04			
to June 1900	53.68	22.36	29.4	64	to June 1900	72.99	14.05	16.1	64
Sept. 1902	67.77				Sept. 1902	129.36			
to Nov. 1903	42.15	25.62	37.8	59	to Sept. 1903	88.80	40.56	31.4	55
Jan. 1906	103.00				Jan. 1906	138.36			
to Nov. 1907	53.00	50.00	48.5	95	to Nov. 1907	81.41	56.95	41.2	95
Nov. 1909	100.53				Aug. 1909	134.46			
to July 1910	73.62	26.91	26.8	36	to July 1910	105.59	28.87	21.5	49
Sept. 1912	94.15				Oct. 1912	124.35			
to Dec. 1914	53.17	40.98	43.5	116	to Dec. 1914	87.40	36.95	29.7	116
Nov. 1916	110.15				Oct. 1916	112.28			
to Dec. 1917	65.95	44.20	40.1	56	to Dec. 1917	70.75	41.53	37.0	63
Nov. 1919	119.62				Oct. 1919	82.48			
to Aug. 1921	63.90	55.72	46.6	94	to June 1921	65.52	16.96	20.6	89
Oct. 1922	103.43				Sept. 1922	93.99			
to July 1923	86.91	16.52	16.0	41	to Aug. 1923	76.78	17.21	18.3	47
Sept. 1929	381.17				Sept. 1929	189.11			
to July 1932	41.22	339.95	89.2	149	to July 1932	13.23	175.88	93.3	149
Mar. 1937	194.40				Mar. 1937	64.46			
to Mar. 1938	98.95	95.45	49.1	55	to Mar. 1938	19.00	45.46	70.5	54
Nov. 1938	158.41				Jan. 1939	34.33			
to April 1939	121.44	36.97	23.3	21	to April 1939	24.14	10.19	29.8	13
Sept. 1939	155.92				Sept. 1939	35.90			
to April 1942	92.92	63.00	40.4	137	to June 1942	23.31	12.59	35.1	140

TO CORPORATE MANAGEMENT

A New Book on **INVESTMENT BANKING**



A growing enterprise needs more working capital to exploit its opportunities—a family-owned corporation seeks to spread its ownership—here are typical financial situations confronting corporate management today.

The investment banker's role in American industry is to assist in solving precisely such problems as these. How he does so is fully and simply described in our new illustrated booklet, "This Is Investment Banking."

Current low interest rates have forced sound bond and note issues to high levels. Institutional and private investor interest in preferred stocks of quality is wide-spread, and in many cases, common stock financing has broad investor appeal. The booklet points out the opportunities existing for thriving corporations to provide capital for future growth—for large stockholders or family owners of companies to diversify their holdings—for managements to simplify their financial structures.

A copy of the Booklet will be sent upon request. Ask for Booklet B-1.

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BOSTON

Montour Deal On

Strategic and profitable coal line, owned by Pittsburgh Consolidation, may be sold to Pennsy and New York Central.

The Montour Railroad, a long-prospering small line-haul carrier, may soon pass to new ownership. The road is now the property of the nation's largest soft coal producer, Pittsburgh Consolidation Coal Co. Rail circles report that news of its joint purchase by the Pennsylvania and New York Central systems is likely to be announced almost any day now.

• **A Coal Road**—The Montour, which operates no passenger service at all, is only 45 miles long. Its importance as a freight carrier, however, is far out of proportion to its mileage. As it traverses western Pennsylvania's Allegheny and Washington counties, the Montour originates a substantial volume of traffic, mostly easily handled through-shippments of bituminous coal.

The railroad is aided, too, by its strategic location in the Pittsburgh industrial region, and by the traffic-interchange connections it enjoys with such



MONEY TO BURN

Into the furnace go 25,000,000,000 lire—\$110,000,000 at the official rate—as Italy junks its battered war-worn paper currency. But issuance of fresh bills hasn't solved Rome's monetary problems. Last week many bank withdrawals followed the unexplained resignation of Italy's Minister of the Treasury. And speculators—and the Italian Embassy at Washington—got a fright when a New York Times misprint recorded the lira at 1,518 to the dollar in the black market instead of 518. There was a front page correction the next day.

important carriers as the Pennsylvania, Baltimore & Ohio, U. S. Steel's Bessemer & Lake Erie and Union R. R., the Pittsburgh & West Virginia, and the New York Central-controlled Pittsburgh & Lake Erie, the Central system's only "owned" entrance into the Pittsburgh area.

• **An Envid Eamer**—Earnings of the property, as a result, have long been the envy of many a longer, and larger, line-haul carrier. Dividends paid its parent in 1930-37, despite the depressed conditions prevailing during so much of that period, actually averaged around \$11.50 per share annually.

Even though somewhat smaller since then, they have continued to be handsome (between \$5 and \$8.25 except for 1944's \$3 and 1943's \$4). Moreover, the dividends of recent years haven't been absorbing all the road's earnings. Profits since 1937 have been ranging between \$5.63 and \$8.10 per share.

• **On the Books**—Finances of the Montour at the end of 1945 disclosed assets of almost \$14,000,000, capital and surplus of \$8,660,000, and some \$560,000 of working capital. Funded debt then outstanding consisted only of \$765,000 in equipment trust certificates. Equipment owned as 1946 opened included 22 locomotives and 1,849 freight cars.

The amount of cash involved in the reported offer for the Montour property still remains an unknown quantity.

However, rail circles estimate (mainly on the basis of various earlier offers made for the road) that at least some \$35,000,000 will be needed for the deal.

P. S.

Greyhound Corp. (BW—Jun. 8'46, p72), if the Interstate Commerce Commission approves, will purchase the Washington Motor Coach Co. of Seattle in order to extend its service into the Pacific Northwest. Already the owner of about 20% of that company's outstanding stock, Greyhound has contracted to buy the rest for some \$1,600,000, or \$30 a share. Washington Motor Coach operates 2,500 mi. of intercity bus routes extending from current Greyhound connections at Helena and Butte, Mont., westward to Portland and Seattle.

The trend toward private placement of new corporate securities with insurance companies (BW—Aug. 24'46, p88) shows no signs of slackening. Recently arranged deals have been quite varied, and have included the direct purchase of \$20,000,000 Southwestern Public Service Co. 2½% 25-year bonds; a \$2,000,000 3½% 15-year note of R. C. Williams & Co., one of New York's largest wholesale grocery houses; a \$1,000,000 15-year 4% note of Duffy-Mott Co., Inc., a bottler of fruit juices; and a \$1,500,000 15-year 3½% note of Standard Cap & Seal Corp.

1,950 Hammer Blows A MINUTE

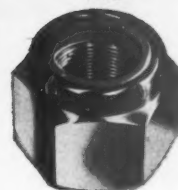


— yet the Red Elastic Collar
protects permanently against VIBRATION

Vibration — from 1,950 sturdy hammer blows a minute — developed *two* problem spots on the No. 36 Black & Decker Portable Electric Hammer. *First*, where the nuts had to *lock in position* on top of the spring-loaded-pins. *Second*, where *prestressed* nuts had to hold the vibrating tool-retainer-yoke to the spring-loaded-pins. All types of conventional fasteners failed. ESNA Elastic Stop Nuts held permanently! — just as they have held against vibration on other types of hammers for over fifteen years.

ESNA Elastic Stop Nuts are self-locking, easily removable, and reusable. They protect permanently against Vibration, Corrosion, Thread Damage, Liquid Seepage and Costly Maintenance.

Here's a challenge: Send us complete details of your toughest bolted trouble spot. We'll supply test nuts — FREE, in experimental quantities. Or, if you want further information, write for literature. Elastic Stop Nut Corporation of America, Union, New Jersey. Agents and Distributors are located in many principal cities.



The RED ELASTIC COLLAR
—denoting an ESNA product—

... is threadless and permanently elastic. Every bolt — regardless of commercial tolerances — impresses (does not cut) its full thread contact in the Red Elastic Collar to fully grip the bolt threads. In addition, this threading action properly seats the metal threads—and eliminates all axial play between bolt and nut threads.

All ESNA Elastic Stop Nuts — regardless of size or type — lock in position anywhere on a bolt or stud. Vibration, impact or stress reversal cannot disturb prestressed or positioned settings.

ESNA
TRADE MARK



ELASTIC STOP NUTS

INTERNAL WRENCHING ANCHOR INSTRUMENT MOUNTING SPLINE CLINCH GANG CHANNEL

PRODUCTS OF ELASTIC STOP NUT CORPORATION OF AMERICA

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● From your engineering department to production, there are many ways to take advantage of Carpenter's experience with Stainless Tubing.

On jobs where you have a corrosion or heat control problem...or where a high strength/weight ratio is

needed...we can be of real help. And we'll be glad to share the kind of "know how" that makes fabrication less costly. Write us today.

CARPENTER STAINLESS TUBING for

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Carpenter
STAINLESS TUBING
"MORE THAN CORROSION RESISTANCE"

PRODUCTION

Sugar Research Rewarded

Cheaper extraction method makes levulose, sweeter than household staple, commercially available. Sugar producers seek wide industrial use of products through extensive scientific studies.

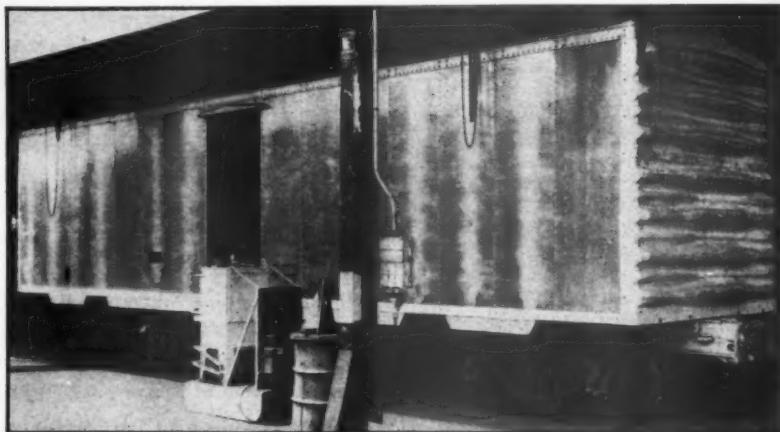
Commercial production of levulose, the sweeter half of the cane sugar molecule, is promised in an extraction method announced jointly last week by the University of Colorado and the Sugar Research Foundation.

More significant than the levulose development are the long-range implications in sugar research which this announcement symbolizes. The University of Colorado project is but one of 44 research activities which the sugar industry is sponsoring in U. S. colleges and universities.

● **Acid Process**—Now in the pilot-plant stage, the new process promises cheap enough levulose (also called fructose

or fruit sugar) to make it attractive for use in manufacture of ice cream, jellies, baked goods, candies, and soft drinks. For, besides its higher sweetening power, levulose dissolves more readily and is stabler in acid solution than ordinary sugar. Except for specialty uses, to sweeten iced tea and fruits or for some dietary requirements, it may never replace conventional sugar (sucrose) on housewives' shelves because of its cost.

The process involves breaking down the sugar (sucrose) molecule into levulose and dextrose (also called glucose) by adding dilute acid. This gives what is known as invert sugar. Adding milk of lime produces a lime-levulose solid,



ANYTHING GOES

And now the refrigerator car that doubles as a boxcar. Nearing completion at Illinois Central's McComb (Miss.) shops, the experimental car (above) is equipped with folding bulkheads for use as a boxcar, is slated for the rails this month. It's reported to be 25% lighter than ordinary "ice" cars due to generous use of aluminum and glass insulation. Inside (right) are built-in fans and air ducts for cooling, and iceboxes that fold out of the way. The car was designed primarily for temperatures low enough to handle frozen foods, but the same fans can be used in conjunction with heaters.

Aluminum Co. of America and the Assn. of American Railroads together with the United Fresh Fruit & Vegetable Assn. cooperated in the project.



which is filtered from the dextrose sirup and suspended in water. Carbon dioxide gas is bubbled through and combines with the lime to form calcium carbonate, leaving a thin levulose sirup.

• **Problems**—The sirup is purified by means of an ion exchanger, which removes inorganic residues. Then it is thickened by evaporation, and the resulting sirup is agitated until crystals form. One problem still to be solved is production of crystals of uniform size.

Wartime sugar rationing was a big factor in spurring the industry to push sugar research. Refiners and raw sugar producers alike were stung by blithe propaganda that people ate too much sugar for their own good anyway, so rationing was a blessing in disguise. They didn't want any such ideas floating around when normal times returned and sugar was again plentiful.

But then they found that no one knew much about sugar, its functions in physiological processes, its chemistry, or its industrial potentialities.

• **Meeting a Need**—In 1943 the Sugar Research Foundation was organized (BW—Dec. 11 '43, p67). Cane and beet sugar interests buried their differences; producers and processors in the United States, Cuba, Puerto Rico, Haiti, and Canada all joined to give the foundation support from the overwhelming majority of the industry.

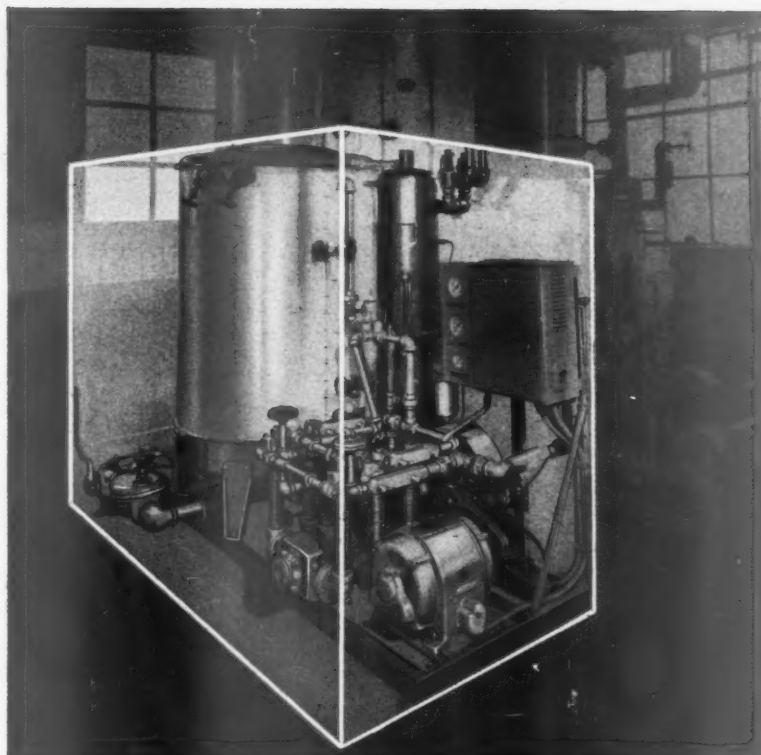
Under the technical direction of Dr. Robert C. Hockett (on leave from Massachusetts Institute of Technology), the foundation has allocated some \$450,000 to projects for collecting and disseminating "accurate scientific information about sugar."

Many of these are designed to build new industrial and commercial markets for sugar, its derivatives, and its by-products. The levulose project falls into this category, as does the study being undertaken on the synthesis of sugar derivatives which might be valuable as insecticides.

• **Popular Notions**—Nutritional studies, designed to counteract the belief that sugar is responsible for everything from diabetes to obesity, are numerous. An Elmo Roper survey for the foundation showed that 61% of the people believe sugar causes teeth to decay more than most other foods, 58% think too much sugar causes diabetes, 48% that sugar is more fattening than most foods.

A nutritional study at the University of Minnesota enabled the National Research Foundation to reduce its recommended daily allowance for vitamin B₁, or thiamine. (Some authorities, believing that Americans weren't getting enough thiamine, had been suggesting that refined carbohydrates such as sugar be replaced in part by those containing thiamine.)

• **Wider Aims**—The sugar foundation does not ignore fundamental research



*This Clayton Steam Generator came in **1** Package!*

• COMPLETE 100 H.P. STEAM PLANT

• INSTALLED IN A FEW HOURS

• FULL OPERATING PRESSURE 5 MINUTES LATER

You will welcome the savings and operating advantages CLAYTON STEAM GENERATORS brought the large, modern laundry in whose plant this picture was taken.

As a result of the exclusive Clayton principle of forced recirculation, CLAYTON STEAM GENERATORS produce highest quality steam *as you need it*. No fuel consumed when steam is not required; yet full operating pressure is developed in five minutes, from a cold start. Operation is fully automatic. Maintenance is extremely low.

Thermal efficiencies of 75% to 80% are maintained throughout the entire operating range. Only one-third the space required for conventional boilers is necessary.

They come to you as a complete self-contained unit, ready to install and operate—no bricking or additional equipment is required.

Present production is limited to six sizes: 10, 15, 25, 75 and 100 horsepower. All are capable of working pressures up to 150 pounds. Write for Catalog GB-9.

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STEAM GENERATORS,
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*He gears the "what-is"
to the "what-should-be"*



There can be many a costly slip between the policies conceived in oak paneled board rooms and the practice in the roaring foundries or routine-riddled administrative offices of operating departments.

WISE management safeguards against serious slips by two means. First, by setting up a rigid system of controls. Second, by retaining an internal auditor, who sees that the controls *control*. The internal auditor analyzes all the complex business operations in detail... keeps mistakes at minimum, scouts

the sources of waste... probes into procedures... checks profit against profit potential. If "what-is" and "what-should-be" don't jibe, the internal auditor asks why... finds out why... makes appropriate recommendations. His compilation and analysis of fresh business facts result in a better, more efficient, more profitable operation.

McBee is not an accounting firm... but with products and methods evolved in forty years of experience... aids the internal auditor by making the vital facts available faster, and in more usable form.



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SKYHIGH TO ROCK BOTTOM

To reach through Boston Back Bay's silt and clay for a rock foundation for John Hancock Mutual Life Insurance Co.'s new 26-story building (BW—Jul.13'46,p30), Raymond Concrete Pile Co. uses what is reportedly the world's biggest pile driver (above). The 130-ft. rig is sinking 1,600 steel piles 110 ft.; Back Bay traditionally builds on wood or concrete piles.

and education. It has put up \$125,000 for a research laboratory at M.I.T., where exploratory studies are undertaken and courses in carbohydrate chemistry given. Another \$45,000 is going into a series of research prizes.

The first \$5,000 award went this year to three University of California scientists who succeeded in synthesizing sugar. This opens the way to further research in the behavior of sugar in life processes, since it makes possible construction of sugar molecules having "tagged" atoms which can be traced during biological processes (BW—Aug. 31'46,p31).

• **Eye to the Future**—In all this work, the sugar industry is looking toward the day when people will again be permitted to buy all the sugar they want, and when there may well be sugar surpluses to contend with.

By then, sugar makers hope, industry at large will be awake to the fact that sugar is basically a pure organic chemical, produced in this country in quantities far exceeding those of any other pure organic chemical, and that it holds tremendous industrial potentialities far removed from its use as a sweetener for the morning cup of coffee.



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Output goes up... costs go down ... with concrete ramps

You eliminate one more bottleneck . . . take another step to more efficient production . . . when you bring your basement up to street level with ramps of concrete. Goods flow faster, operations are smoother, production costs go down.

Present building controls permit improvements of this type; so plan to gain the advantages of concrete ramps in your plant. Plan also to include Lehigh Cements in your bill of materials . . . for Lehigh products have proved their worth in concrete tests the Nation over.

Lehigh supplies cement for every concrete need, among them: Lehigh Early Strength Cement for hurry-up jobs; Lehigh Air-Entraining Cement for outdoor surfaces in cold climates.

Ask your Lehigh Dealer to assist with any construction job you undertake. You can get plenty of sound advice about concrete from him.



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• CHICAGO, ILL.
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LEHIGH PORTLAND CEMENT COMPANY

VENUS VELVET PENCILS ARE STRONG



This means that the lead is actually bonded to the wood. You can't buy better office pencils!

And now... pre-war, *real* rubber erasers are back!

VENUS
-by the makers of the famous VENUS Pens
AMERICAN LEAD PENCIL COMPANY

Bent on Living

Electrol, Inc., orderless after V-J Day, meets peacetime competition by "designing for production" to cut costs.

How a small, war-fattened industry can survive in postwar competition for markets is shown by the experience of Electrol, Inc., of Kingston, N. Y. The trick, judging by Electrol's case history, is to cut down on manufacturing costs through application of superior engineering methods.

A year ago Electrol, a war-financed hydraulic control firm, found itself with all its contracts canceled and no future orders on its books. Today the company is well on the way to solid peacetime production.

- **Position Reversed**—Utilizing its war-learned techniques, Electrol is producing hydraulic control units at prices that are lower than average. It has regained its wartime aircraft customers who have converted to peacetime operation and has also built up hydraulic control business in other fields.

Appointment of the company's chief engineer, B. N. Ashton, to the position of president furnishes an important clew to the company's success in adapting to new conditions. Since his early American experience in the shops of the Brooklyn-Manhattan Transit Co., Edinburgh-born Ashton has believed strongly that engineering designs must be shop-produced. Every Electrol design is first studied for its problems in manufacture, and engineers maintain constant contact with the shop, seeking to simplify designs to reduce machining time.

- **Small Beginnings**—Electrol originally manufactured oil burners and magnetos. When business dwindled and the board of directors decided to venture into the hydraulics field, Ashton came in as engineering consultant. On the strength of a few valve units specifically designed for manufacture on available equipment, Electrol received an order from Grumman Aircraft.

First production was at the rate of five valves a month, and the first valve was delivered by taxicab from Kingston to Farmingdale, Long Island. Ashton was next made chief engineer and told to design a complete line of hydraulic units, suitable for easy manufacture, to sell at lower prices. How well he succeeded is illustrated by that same type of valve. In 1940, it sold for \$60; in 1945, production was at the rate of 3,400 a month and cost was down to \$20 for an improved design.

- **War Jump**—Throughout the war years the company did extensive business with Grumman, Republic, Bendix,

and other Navy contractors. Gross sales, after renegotiation, went from \$350,000 in 1942 to a peak of \$3,700,000 in 1944.

Electrol's bids on new business are more often than not submitted along with a suggested redesign. And the redesign is based on the use of easily available shapes and simplification of details so that cost will be low.

A typical case is a "power-pack" unit now being made for Republic's Seabee. The entire unit combines in one package a reservoir, pump, relief valve, two selector valves, and necessary piping, yet sells for less than \$35, complete.

NEW METALLIC THREAD

Improved metallic threads, said to be nontarnishing, lighter than ordinary metallic yarns, and easily adaptable to existing textile machinery, are now in production by the Dobeckmun Co., Cleveland (BW-May 46, p. 62). In addition, these new yarns are available in gold, silver, and copper colors, with iridescent hues to be produced shortly.

Although metallic yarns are not new, even having been mentioned in biblical quotation, the Dobeckmun development consists in using thin acetate films to protect the base metal. The yarn is produced by laminating both sides of aluminum sheet with acetate film, using a special synthetic adhesive. The sheets are then slit into $\frac{1}{8}$ and $\frac{1}{16}$ in. thicknesses. In addition to this flat form, the yarn can be made as a round thread wound around a coarse yarn, or a novelty thread combined with other fibers.

The development of the yarn stems



Years of experience working at machines have convinced B. N. Ashton, Electrol's new president, that shop-produced designs are important in keeping costs down.

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"We bought the light ones—
didn't we, mother?"



One touch . . . one lift! You'll buy magnesium's lightness, too! And thank yourself forever after.

You'll see a fine application of magnesium when you pick up these extraordinary pruning shears, made by one of America's leading manufacturers. Now on the way, they represent just one of the many modern products of this lightweight metal.

As the foremost producer of magnesium, Dow cooperates with many such concerns in bringing its exceptional qualities to you.

These lightweight pruners will soon be available. Light? They weigh just five and a half ounces!

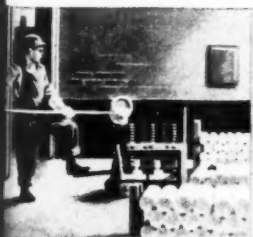
In use, you'll value that lightness more by the minute. And you'll come to admire the sturdy durability of magnesium, too.

Watch for all kinds of new lightweight products—of magnesium!

*Ready...
to make products move!*

MAGNESIUM

LIGHTEST OF ALL STRUCTURAL METALS



Dow's production of magnesium metal—obtained from sea water by a unique process—is abundant for widespread use.



Finishing a cargo aircraft door fabricated from magnesium sheet. Magnesium lends itself to a wide variety of fabrication methods.



This lightweight railway dock board is just one of the many magnesium products that cover a wide range of consumer and industrial items.



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- adds *Strength*
 - cuts *Weight*
- of trailer body



Shown above is the welded Yoloy frame of a well known Van trailer, and below is a view of the finished vehicle. The manufacturer says, "To build a trailer strong, yet light in weight requires careful selection of material and the proper application of the material in construction."

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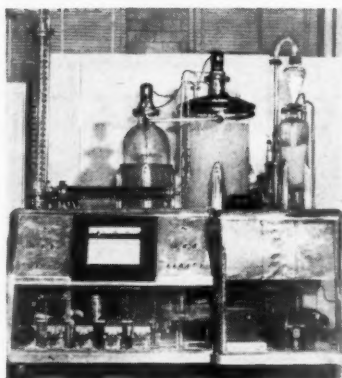
Sheets-Plates Pipe and Tubular Products-Conduit Bars-
Coke Tin Plate-Electrolytic Tin Plate-Rods-Wire-Cold
Drawn Carbon Steel Rounds-Tie Plates and Spikes

THROUGH the use of Yoloy high-tensile steel the engineers who designed this trailer body combined exceptional strength with light weight. Upon completion this well known Van trailer is welded into an integral unit; strong enough for years of profitable service yet light enough for profitable pay loads.

Yoloy is Youngstown's nickel-copper low alloy steel. This fabricator, like many others has proved Yoloy is tough and strong. Yoloy has good welding qualities, also, which makes it an ideal material for light weight construction. As its corrosion-resistant characteristics are outstanding, Yoloy-built equipment can give long, satisfactory service even under severely adverse conditions.

Call the nearest Youngstown District Sales Office or write us direct for full information on Yoloy.

Every Farm May Have Its Distillery—for Fuel



Farm chemurgists, long dreaming of the day when the farmer could make his own power fuel from waste and low-cost crops, saw their vision nearer realization this week when Joseph E. Seagram & Sons, Inc., unveiled a miniature distillery little bigger than a kitchen stove which will turn out 7½ gal. of 95% ethyl alcohol per day from three bushels of almost any carbohydrate crop.

• **Mobile Units Next**—Seagram displayed the continuous process alcohol unit (picture) at the National Chemical Exposition in Chicago, may turn the thing over to some manufacturer for production and marketing. (Manufacturing cost estimates have not been disclosed, but

the first unit cost Seagram \$25,000.)

Next step, now in the planning stage, is a mobile distillery mounted on five railroad cars, capable of being moved from one grain elevator to another. It could process 500 bu. of corn a day, yielding 2½ gal. of 190-proof alcohol per bushel at an estimated cost of 15¢ per gal. less the value of byproducts returned to farmers for feed or fertilizer. A unit mounted on truck trailers also is in the works. Either of these units could handle other carbohydrates besides grain.

• **Alcohol Engines Here**—Seagram says the problem of using alcohol in cars, tractors, and other internal combustion engines already has been solved. The company, in cooperation with the Foreign Economic Administration, Indiana Farm Bureau, and the Vimalert Co., Jersey City, N. J., has modified carburetion and manifolding on a Chrysler industrial engine so it can burn alcohol, with excellent results.

A different type engine, with two opposing pistons in one cylinder, has been designed especially for fuel alcohol by Scandia Mfg. Co., North Arlington, N. J. Use of alcohol as fuel in numerous foreign countries also is cited. Representatives of some of these countries are reported to be interested in Seagram's development.

from eight years' research in cooperation with the Aluminum Co. of America and Eastman Kodak. During the war a similar process was used for packaging perishable foods. The company, in addition to producing the laminated threads, is planning to go aggressively into the packaging field with this basic development.

KING-SIZE PRISM

Weighing more than 300 lb. and measuring 27½ in. across, the largest prism ever built, according to its makers the Perkin-Elmer Corp., Glenbrook, Conn., is being delivered to the Observatorio Astrofisico Nacional, Tonantzintla, Puebla, Mexico. The prism is to be used in the photographing of stellar spectra more than 100,000 times fainter than the faintest star visible to the naked eye.

The original glass from which the prism was ground weighed 379 lb. Accuracy of the prism is such that the combined variation of its two surfaces is less than 3 millionths of an inch, equivalent to less than ¼ of a wavelength.

P. S.

A comprehensive treatise on textile fibers, including types, characteristics, applications, finishes, and dyes is available in a new book "America's Fabrics" published by the Macmillan Co., 60 Fifth Ave., N. Y. 11. Manufacturing processes for both natural and synthetic fibers are described, as well as textile processing. Information on standards, testing, and labeling is also included, along with a dictionary of the various kinds of fabrics.

British aircraft manufacturers are studying the advantages of having aircraft seats face backward, to minimize injuries caused by forced landings. Seats and flooring will have to be stronger, which means some increase in the weight of the plane.

A temperature control device supplies water at proper temperature to reduce pain in drilling of teeth. The apparatus consists of an electrically operated valve controlling water flow, a heating reservoir, and attachments for directing the stream of water on the tooth being drilled.



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Protect your men with the best quality waterproof clothing. Royal Archer Rubberized Work Clothing is designed to make every motion easy and natural. This

increases efficiency, cuts down on accident rates and lost man hours, means better employee morale.

There is a Royal Archer garment for practically any job. Special apparel designed, if needed; also a wide range of coated fabrics for many industrial applications including Archerite plastic films and coatings. Archer waterproof fabrics are coated to be resistant to alkalis, acids, oils, abrasives and most chemicals.

Ask your Industrial Wholesaler about Royal Archer Work Clothing, or write direct to Archer Rubber Co., Milford, Mass. — Makers of Quality Rubberized Goods Since 1907.



Rubberized WORK CLOTHING

LABOR DAY • 1946

-Time for wise union leadership

Labor Day, 1946, finds one hopeful element in the relations between American management and labor which was not there on Labor Day, 1945. It comes in recent expressions by a number of national leaders of organized labor that increased "real" wages depend upon *increased productivity, i.e. increased output per man-hour*. Increased money wages which are promptly offset by higher prices do nobody any good.

If these expressions, *which still remain to be substantiated by practical performance*, come to be accepted by the rank and file of labor in each community, Labor Day, 1946, can usher in a period of great and perhaps unprecedented improvement in the economic wellbeing of wage earners—as well as the wellbeing of the country at large. If, on the contrary, they remain merely window dressing and there is a continuation of the post V-J Day process of increasing wages and then prices, the outcome can only be the bursting of an inflationary bubble, with attendant suffering for workers and the community generally.

Competition requires management to bear down heavily on increased labor productivity as a prelude to wage increases. Management, however, has rarely made a more forthright statement on the importance of increasing labor productivity than that contained in a recent issue of **LABOR'S MONTHLY SURVEY**, an official publication of the American Federation of Labor.

William Green, the Federation president, led off with a "message to American workers." He remarked, "Our major need is increased volume of production." Observing that "wage increases this spring have been paid for by raising prices," the survey itself goes on

to say that "Today America's ability to raise wages without increasing prices and living costs depends on increasing productivity in civilian industries . . . Here is the challenge to free labor and free enterprise today: *Cooperate to increase productivity and raise living standards without strikes.*" (Italics supplied.)

The importance of increasing production was also recently stressed by Walter Reuther, President of the United Automobile Workers, C.I.O., who remarked that his union "is just as eager as management to get the (automobile) industry into maximum production." In taking this general line he was in accord with the position of Philip Murray, head of the C.I.O., who in a book, "Organized Labor and Production" written with Morris L. Cooke, remarks that, "The modern labor leader also realizes that to receive a good day's pay a

man must do a good day's work and that *increased productivity has been the vital factor in the country's industrial supremacy and its relatively high wage scale.*" (Italics supplied.)

In citing increased productivity as the key to increased "real" wages these labor leaders—and manage-

SPOT CHECK ON LABOR OUTPUT

In the absence of reliable general statistics on what has happened to productivity of labor since V-J Day (because of strikes and reconversion complications) the McGraw-Hill Publishing Company asked the executives of a cross section of American industry to report their own impressions. The questions asked and summaries of the replies, which varied markedly from industry to industry and plant to plant, follow.

Question No. 1. How well have workers performed since V-J Day as compared to their pre-war effort?

Answer. Worker effort has been below pre-war. There are exceptions, particularly among older and more experienced workers; and there are quite a few signs of improvement.

Question No. 2. How much headway have you been able to make since V-J Day in improving labor productivity by better equipment and organization?

Answer. Some headway is generally being made, but it has been greatly retarded by inability to get new equipment and, in some cases, by lack of labor cooperation in improvements in organization.

Question No. 3. How much improvement in equipment and organization is to be anticipated in your business over the next year?

Answer. Marked improvement in productivity (in a few cases as much as 20 per cent) can generally be made if there is sustained production and full cooperation between labor and management.

ment—have the historical record entirely on their side. In the 40 years prior to the outbreak of World War II output per man-hour for the country as a whole was approximately doubled. Over the same period the “real” hourly earnings of industrial workers were also approximately doubled. There were, of course, great variations in the increase of output per man-hour from one line of activity to another. Also, there were periods when increases in “real” wage rates lagged behind increases in productivity. But for the 40 year period as a whole and the economy as a whole there is no mistaking the fact that the route to increased “real” wage rates was increased productivity.

Three economic factors played major roles in this doubling of production per man-hour which has made America the industrial marvel of the modern world. One was the skill and diligence of American workers. A second was the skill and diligence of American management in organizing production. A third was the improvement of machinery and the increased application of power to it.

Wartime Record

During World War II this sustained increase in the productivity of labor in *civilian* manufacturing industries, which had averaged about 3 per cent a year, was brought to an abrupt halt. Much of the most efficient segment of the nation's labor force went to war or war industry. Also, civilian industry was starved for new equipment while we equipped our arsenals. The result was that the productivity of labor in those civilian manufacturing industries for which the government keeps records actually declined throughout most of the war. By 1945 it was no higher than in 1941, whereas, if it had maintained the long run average, it would have been about 12 per cent higher. In the meantime, however, average hourly wages in these civilian industries had increased about 40 per cent.

In *war* industry, which started from low levels of production at strange tasks, there were substantial increases in output per man-hour. Many of these increases involved new processes, improved techniques, and better machines which can be adapted over a period of time to the improvement of productivity of labor in civilian industry.

Since V-J Day, however, labor, led on by a misguided government, has had its sights on higher money wages instead of improving productivity which would have laid the foundation for increased “real” wages. Consequently, debilitating industrial

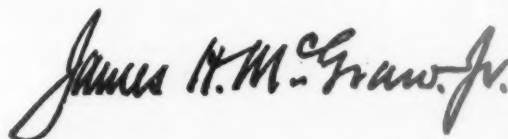
strife ended in a round of wage increases which, in the absence of increased productivity, is being washed out by higher prices.

To Keep Production Rolling

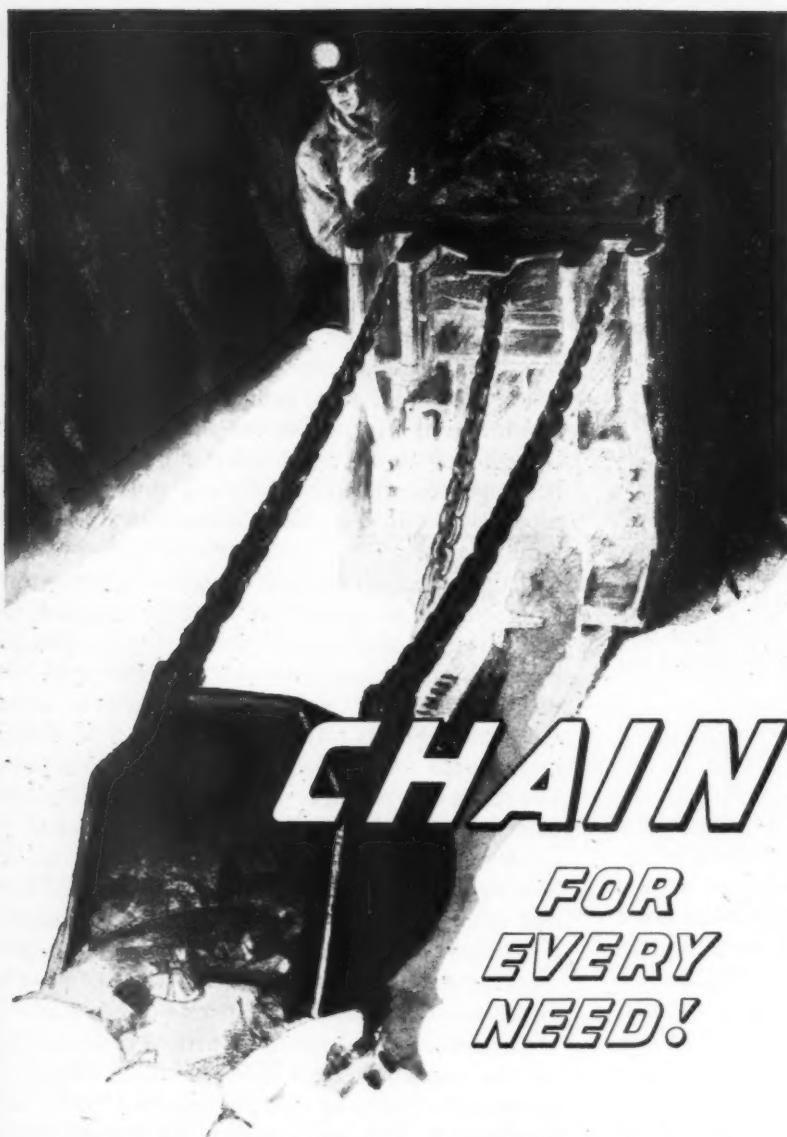
However, as indicated by the summary of a McGraw-Hill sampling of the current experience of industry in increasing output per man-hour, which appears in the center of the page, there is hope that the situation ahead can be improved. After agonizing delays because of work stoppages, material shortages, and reconversion complications, industrial production is beginning to roll again. Allowed to roll it will not be long before it will be making those advances in productivity which are the only true basis for increased “real” wages.

If the process of keeping American industry rolling to new highs of productivity is to be resumed, management must see that the past practice of translating increased output per man-hour into increased “real” wages is not only sustained but wherever possible accelerated. For its part organized labor must abandon its manifold feather bedding rules and other production-restricting practices which afflict considerable segments of American industry. Further it must give incentive systems of pay, honestly conceived and honestly administered, a fair break. *Management and labor and government and the community at large must collaborate in removing that specter of working one's self out of a job which has been one of the greatest causes of restriction of output.*

The current emphasis by leaders of organized labor on the economic truth that increased output per man-hour is the only road to increased “real” wages is important. The next step is to see that recognition of this truth seeps into the rank and file of labor and industry and becomes the basis of a program of action at the local level. If it does, and quickly, Labor Day, 1946, may mark a tremendous turning point toward sustained prosperity not only for labor but the community at large. If it does not, union leadership will fail in its responsibility and must answer to the American people for the consequences of such a failure.



President McGraw-Hill Publishing Company, Inc.



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Whether you need chain for underground operations, or handling timber on mountain slopes, we can supply it. International makes chain for every need: industrial, marine, farm, automotive. We offer prompt help in the solution of any unusual chain problem—our manufacturing and service facilities are complete in every detail.

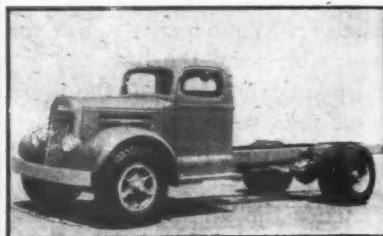
INTERNATIONAL CHAIN & MFG. CO.
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The
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Line

NEW PRODUCTS

New Truck Lines

A line of eleven trucks, ranging from 14,000 lb. to 50,000 lb. gross vehicle weight, is announced by White Motor Co., Cleveland. Four of the new models are powered by 170-hp. and 184-hp. engines. Included in the series are three 6-wheel and three tractor models. Major



design features common throughout the entire line include stellite-faced exhaust valves and valve seat inserts with sodium-cooled exhaust valves; hydraulic valve lifters; duplex carburetion with individual-cylinder manifold ports; copper-lead bearings. A closed, pressure-type, cooling system is also used.

Increased driver comfort is said to be obtained through an improved cab design, the result of posture and fatigue experiments carried on during and since the war, along with a newly designed seat, greater headroom, and a positive system of controlled heating and ventilation. A novel feature of the cab is the instrument panel, which is removable for access to the wiring, cables, oil line tubing, etc., when inspection or servicing is required.

High-Speed Motor

A new high-speed, series-wound motor, of 1/15 hp., made by John Oster Mfg. Co., Racine, Wis., has high starting torque and varying speed characteristics. It operates at 4,000 to 8,000 r.p.m. full-load speed on both a.c. and d.c. Typical applications for the Type LU-450 motor are small tools, engraving machines, dental equipment, blowers, and mixers. Dimensions are 4½ in. over-all, 3 21/64 in. in diameter. Weight is 3 lb. 13 oz.

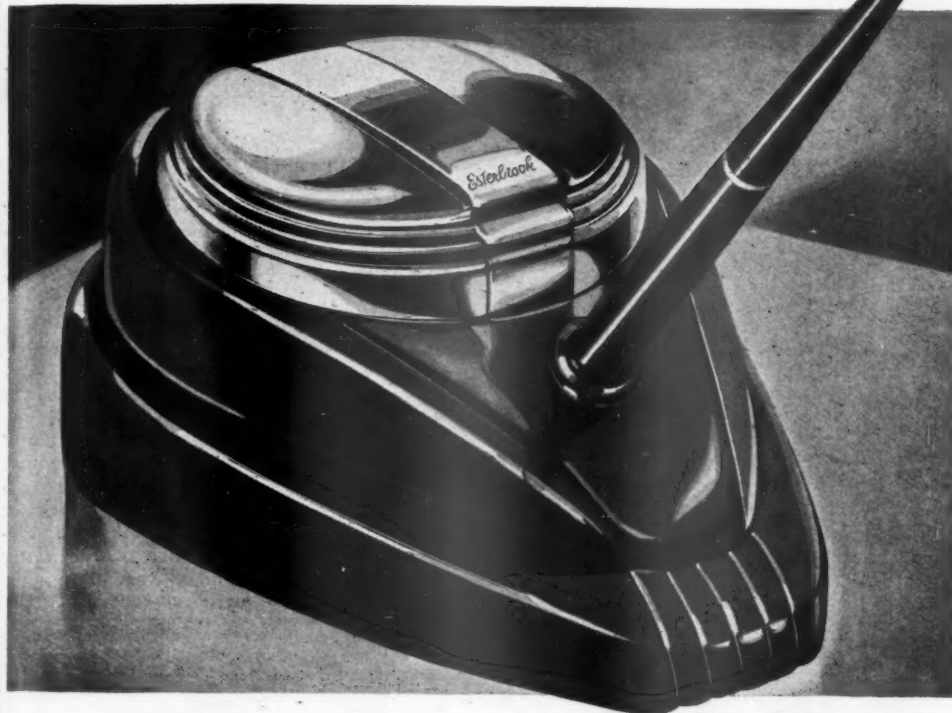
Lightweight Engine

A lightweight, ¾ to 1 h.p. engine (dependent upon speed) to equip lightweight portable and self-propelled equipment will reach production this month at Power Products Corp., Grafton, Wis.

All aluminum except for bearing, crankshaft, and part of the magneto, the 16-lb. engine is air-cooled. Its sin-

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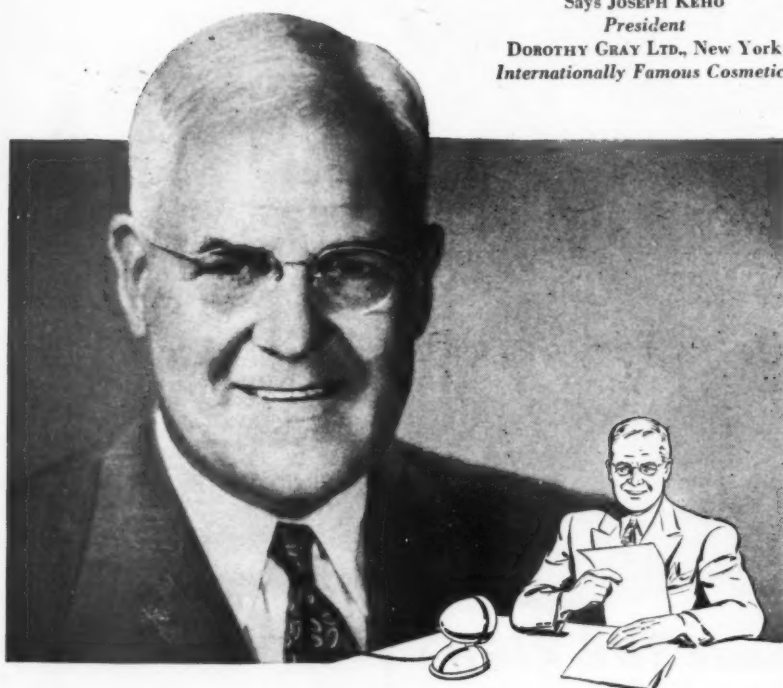
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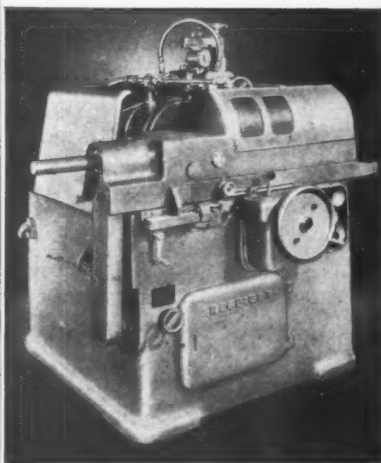
gle cylinder operates for three hours on the 4/10 gal. fuel capacity. The 8/10 cu. ft. (8½"x11"x14") unit can be tilted to a 45-deg. angle without interrupting operation.

First engines produced are scheduled for mowers, bicycles, milking machines, and water pumps. Applications for compressors, floodlights, boats, and other equipment will be developed later. Larger sizes of the engine are planned for future production.

Precision Grinder

A precision annular form grinder announced by Sheffield Corp., Dayton, Ohio, utilizes the "Crushtree" principle of wheel dressing for production of annular and cylindrical forms such as circular form tools, ball bearing seals, shift grooves in transmission gears, and similar forms of intricate and precise profile. It is said to be the first American machine of this special type.

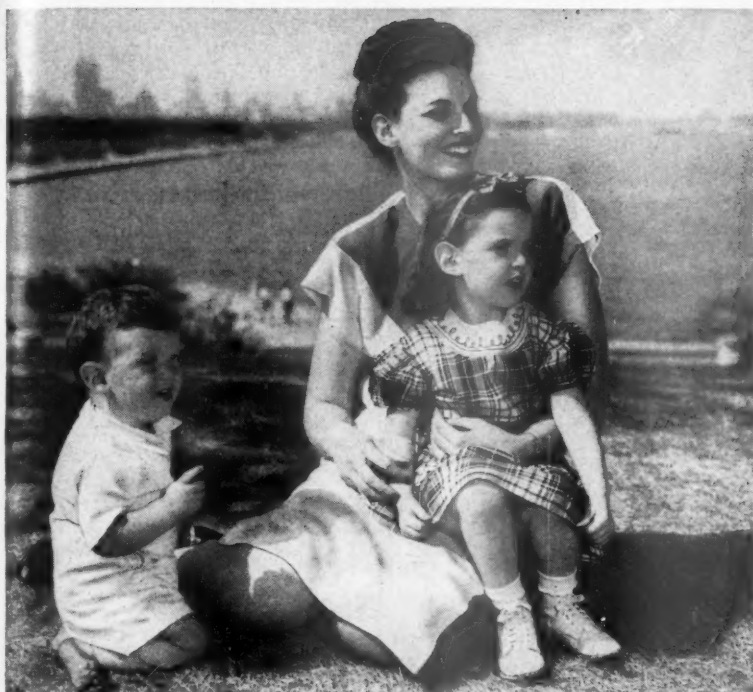
A variable speed geared-head motor drives the work head spindle in either direction through pulleys and two V-belts over a spline shaft required for table positioning. The work head spindle may be of either live or dead center construction. Standard work speed range



is 60 to 360 r.p.m. and may be varied in infinite increments. Additional work speeds, either higher or lower, can be arranged if desired. A hand crank is used for table positioning. The fine adjustment knob provides micrometer control of the table position. A table lock prevents any shifting of work with respect to the wheel during the work cycle. A precision spacing attachment, using the standard gage blocks and dial indicator, is available as an accessory.

Air-Conditioned Pillow

Shredded foam rubber is used in a new pillow being marketed by the Interstate Latex Co., Youngstown, Ohio. The product is said to be odorless, dust-



Chicago and Northern Illinois — A Healthful Place to Live

FOR many decades, Chicago and Northern Illinois have provided unusually healthful living advantages. The notable contributions by the Chicago Board of Health, and those of the outlying communities, have attracted nation-wide recognition.

One of the best reflections of health and medical control is the rate of infant mortality. Child-saving depends upon proper medical and sanitary services during prenatal and postnatal life. Equally, it depends upon active, intelligent care by the family.

Chicago's infant mortality rate has been the lowest by comparison with the other largest cities in America for many years. The infant death rate in 1945 was 29.6 per 1000 live births—again the best record of the larger cities in the nation.

stantly growing demands. Chicago's vast, modern sewerage disposal facilities have been planned to keep pace with the dynamic growth of this area.

These measures for the public health, boldly conceived and firmly executed, have helped to produce in Chicago and Northern Illinois an unusually wholesome living environment.

To industry and business seeking locations, a clean bill of health is only one of the many advantages offered by the Chicago and Northern Illinois territory. As an aid to those considering re-location, we have established the Territorial Information Department to supply factual data concerning this area. This department will supply studies in as great detail as is required, confidentially and without charge.

Industries locating in this area have these outstanding advantages: Railroad Center of the United States • World Airport • Inland Waterways • Geographical Center of U. S. Population • Great Financial Center • The "Great Central Market" • Food Producing and Processing Center • Leader in Iron and Steel Manufacturing • Good Labor Relations Record • 2,500,000 Kilowatts of Power • Tremendous Coal Reserves • Good Government • Good Living • Good Services for Tax Dollars •

Send for free booklets containing useful information on these advantages

This is one of a series of advertisements on the industrial, agricultural and residential advantages of Chicago and Northern Illinois. For more information, communicate with the

TERRITORIAL INFORMATION DEPARTMENT

Marquette Building—140 South Dearborn Street, Chicago 3, Illinois—Phone RA 4146

COMMONWEALTH EDISON COMPANY
WESTERN UNITED GAS AND ELECTRIC COMPANY

PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS
ILLINOIS NORTHERN UTILITIES COMPANY

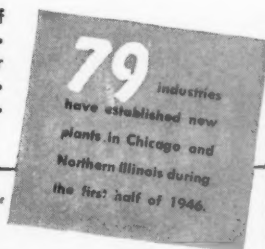
A new all-time low for Chicago of 1.6 maternal deaths per 1000 births was reached in 1944 and 1945, as the result of a long-established program of prenatal care which has placed Chicago in the forefront by comparison with the rates of other large cities.

Especially notable are the recent results of Chicago's diphtheria control program, which led to the establishment in 1945 of a new all-time low death rate of 0.1 per 100,000 population. Only 34 cases and 3 deaths were reported.

Chicago had one typhoid fever death and 13 cases of the disease in 1945—another all-time low case rate.

For more than a decade, Chicago has shown a general reduction in illness and mortality rates related to practically every disease or condition responsive to public health measures. In that time, there were no instances where the spread of typhoid fever, tuberculosis or diphtheria was traced to milk contamination.

At the shore of a fresh water body, Chicago has kept its plentiful water supply safe and adequate despite con-





"Slice me off a Layer of Atoms... cheap!"

Sorry, but we haven't all the know-how to do it yet. The best we can do now is to mass produce parts with tolerances to "quarter-tenths" and with surface finishes to "millionths". We'll keep it in mind, however, because we are always intrigued with so-called "impossible" problems.

Thus far, such problems have been solved by our "Mass Precision" method — a method perfected by Nichols for mass producing parts and assemblies to the most precise dimensions, on a strictly interchangeable basis. Such parts are low in cost — so low, in fact, that you will doubtless find "Mass Precision" cheaper than less accurate means.

Someday Nichols may be able to fill an order to slice off a layer of atoms — in the meantime you should investigate the present quality of Nichols' parts and assemblies. Write for the new booklet "Mass Precision". It shows what Nichols has done for others — suggests what can be done for you.

W. H. NICHOLS COMPANY, 48 Woerd Ave., Waltham 54, Massachusetts



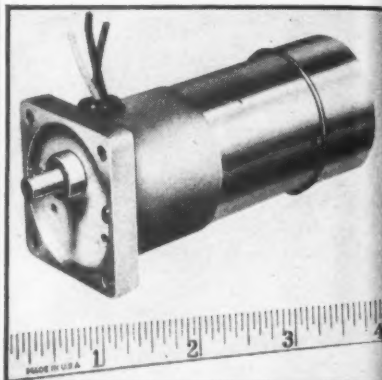
"Accurate" *Nichols*

PRECISION ENGINEERING AND MANUFACTURING FACILITIES FOR MASS PRODUCTION

less, verminproof, and resistant to lumping or shifting of the material. Feature of the SlumberAir is the patented pocketing of the shredded latex within the ticking. Both natural and synthetic rubber are blended in the making of the shredded foamed latex.

Lightweight Rotary Actuator

The model 181 midget actuator, developed by Lear, Inc., Grand Rapids, Mich., weighs 0.6 lb., provides rotary



actuation for loads ranging from 0.1 to 15.0 lb. in., at speeds from 2.5 to 375 r.p.m. It is said to be suitable for remote valve operation, radio tuning motors, business machines, camera shutters, and similar applications. Four standard gear reductions are available. The actuator is powered by the new Lear "G" motor, with output ratings from 0.4 to 15 w. at 24v. direct current.

Silver Brazing Alloys

Two new silver brazing alloys featuring lower silver content are announced by Handy & Harman, 82 Fulton St., New York 7. Easy-Flo 45 is a 45% silver alloy. In addition, it contains copper, zinc, and cadmium. It has a low melting range—1,120 F to 1,145 F. Joints produced between ferrous, nonferrous, and dissimilar metals are claimed to be strong, ductile, leak-tight. It is said to offer the advantages of alloys with a higher silver content with the economy of less silver in its composition. Easy-Flo 35 has a wider melting range—1,115 F to 1,295 F—and is free flowing at low temperatures.

Gas-Measuring Instrument

The M.S.A. Oxygen Indicator Type C, for measuring the oxygen content of gaseous mixtures in chemical, metallurgical, petroleum, and allied industries, and for combustion and process control, is made by Mine Safety Appliances Co., Pittsburgh.

The electrolytic detector cell is a plastic container with a hollow carbon

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Although you are doing a good public relations job now, you can greatly enrich your program by including motion-picture and slide films . . . as many leading companies have found to their profit.

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Micarta has a combination of qualities which may solve the *materials problem* in your new (or old) product. In addition to heat resistance—it has:

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REDUCES NOISE—absorbs vibration.

HIGH CORROSION RESISTANCE—unharmed by 10% solutions of most acids and alkalis. Resists oil and water absorption, too.

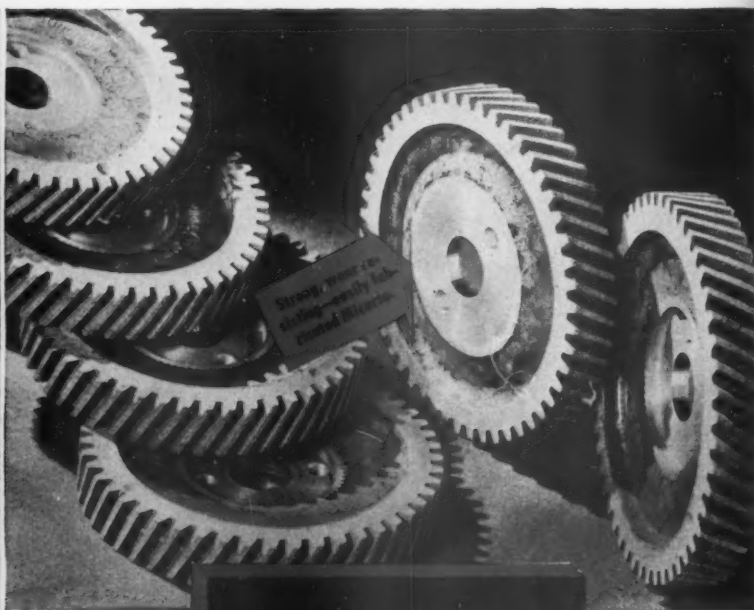
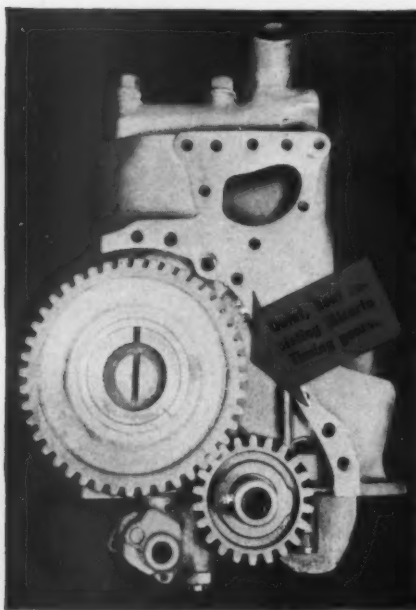
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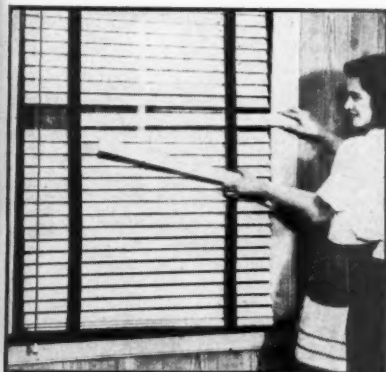
tube and metallic plate serving as electrodes in approximately an ounce of liquid electrolyte. Polarization in the cell causes hydrogen to be deposited on the carbon pole. When a gas sample containing oxygen is passed through the hollow carbon electrode, diffusion through the porous carbon causes the oxygen to combine with the electrolytic hydrogen reducing the internal resistance of the cell and causing current and voltage output to be increased. A direct reading meter indicates the percentage of oxygen in the sample.

Heat-Resistant Conveyor Belt

A new type of conveyor belt, which was developed by the Connecticut Hard Rubber Co. of New Haven especially for Clarence Birdseye's anhydrous food machine, is covered with Silicone rubber. The flexible metal belt not only withstands the high temperatures (reaching 525 F°), encountered in the quick-dehydrating process, but the wet product being dried on the belt does not "burn fast" or stick to it as might be the case with metallic or wire mesh belts.

Easy-Clean Blind

With the Walker removable-slat blind, slats can be removed for cleaning, refinishing, waxing, and repair; or single damaged slats can be replaced. In this blind, the cord is not threaded through the center of the slats, as is ordinarily done, but is mounted adjacent to the ladder and is run through notches or slots at the edge of the slat. The cord is placed near the rear tape on one side of the blind and the front tape on the opposite side, thereby equal-



izing the lifting balance of the blind. The new arrangement of the cord permits complete closure of the blind. The slats are said to be stronger and more durable because they are not drilled through the center, but merely notched on opposite edges. The new blind is made with wood, steel, or aluminum slats. Data are available from Rupert N. Hoye, 327 South LaSalle St., Chicago 4, Ill.

Product Performance

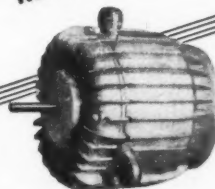
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with *Lamb Electric* motors

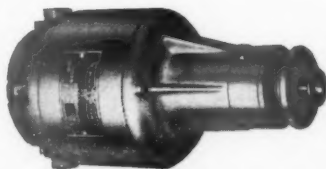
Specially designed for each particular application and with dependability built into every part, Lamb Electric Motors have established a reputation for long, trouble-free operation.

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An outstanding hair dryer motor engineered to insure quiet, vibrationless operation.



Universal motor, with shaft carried on double row ball bearings; developed for use as a high-speed grinder.

Space factor in this power unit is minimized by having output shaft at right angles to motor shaft.



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SPECIAL APPLICATION
FRACTIONAL HORSEPOWER **MOTORS**

LABOR

Coal Parleys

Lewis now faces tougher resistance to foremen's union, but he is on stronger ground in controlling welfare fund.

Until this week, the soft coal mine operators had not chattered with John L. Lewis since last April. The government has been running the mines since May 22, following their seizure during a temporary suspension of the strike that had begun Apr. 1.

• **Agreement Sought**—Much has happened since then which may influence the bargaining positions of both operators and mine workers, now that Adm. Ben Morecell, coal mines administrator, has brought them together again in hope of obtaining an agreement which would permit return of the mines to private operation.

A recent decision on foremen's unions by the Sixth Circuit Court of Appeals in Cincinnati (BW—Sep. 7 '45, p. 86) undoubtedly will bolster the operators' resistance to recognition of Lewis' supervisory union as bargaining agent for coal mine supervisors. In upholding National Labor Relations Board support of an independent union of foremen at Packard Motor Car Co., the Cincinnati court pointed out that the situation at Packard was different from one in which a union sought to represent both production workers and their supervisors, as is the case in the coal dispute.

• **NLRB Hearings**—The props would be knocked out from under Lewis' supervisory union if the court which ultimately decides the issue in the coal mines follows the same reasoning. Hearings were held by NLRB in Pittsburgh this week, on a complaint that Jones & Laughlin Steel Corp. has refused to bargain with the United Clerical, Technical & Supervisory Employees, District 50, U.M.W., which was certified by NLRB as bargaining agent of supervisors at two J. & L. coal mines.

The complaint was filed in accordance with the terms of an agreement the government signed with the supervisory union after seizure. The purpose is to protect the corporation's legal rights. If J. & L. is ordered to bargain and refuses—and it is almost a certainty that it will—the case will get into the federal courts.

• **Welfare Fund Grows**—Lewis would appear to be on stronger ground with his demand for a welfare and retirement fund controlled by the union now

that the anthracite operators have given him just that. Two of the three trustees under the anthracite agreement are named by the union. In soft coal, the contract with the government provides for one trustee representing each side and one selected by both of them. The 5¢ deductions for each ton of coal produced have been going into the fund at the rate of more than \$2,000,000 a month.

As trading material for a union-controlled welfare fund, Lewis could very well use the threat of asking for a wage increase higher than the \$1.85 a day for which he settled with the government last spring.

• **Record Output**—Bituminous coal production, meantime, is breaking all records. Industry spokesmen attribute this to an increase of 6% to 7% in employment over a year ago, rather than to greater productivity. The union contends more workers are in the mines because of improved safety conditions forced by the government.

During June and July 101,500,000 tons of soft coal were mined, compared to 98,204,000 for the same period last year. Excluding the week in which July 4 occurred, weekly production averaged better than 12,250,000 tons. In the corresponding weeks of 1945 there was none in which production reached 12,000,000.

Even with the six-week strike, production between Jan. 1 and Sept. 1 was

347,296,000 tons this year compared with 392,300,000 tons for the corresponding period last year.

• **Bureau's Estimate**—During three months of government operation—June through August—about 162,800,000 tons were mined, as compared to 145,800,000 tons in the same months of last year. Production would have gone higher if the railroads had been able to move it. The Bureau of Mines estimates that total production this year may reach 540,000,000 tons, a high-ranking figure.

Wage-Cut Snarl

Penalized for unwitting pay reductions, employers hope NWSB will define wages and controls. Board has few cases.

What is a wage decrease in the eyes of the law? What wage cuts are permitted by existing wage controls?

Failure of the National Wage Stabilization Board to give detailed answers to both of those questions has meant headaches for some employers. For others, like Kelsey-Hayes Wheel Co. in Detroit, it has meant actual financial losses. This company will not be able to charge \$8,000 of its payroll as a cost for income tax purposes because NWSB found that it had put into effect a technical wage decrease for which it should have sought prior approval.

• **In the Dark**—Kelsey-Hayes had discontinued special rates for members of



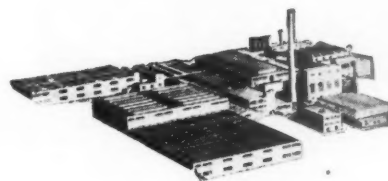
TURNING LOSS INTO LABOR RELATIONS GAINS

Transformation of company villages within five years into employee-owned residential districts (above) has paid off for Marshall Field & Co. Manufacturing Division in better labor stability plus improvement in general welfare. Homes at Spray, Draper, and Leaksville, N. C., and at Fieldale, Va., were offered at half the appraised value—averaging \$850 for a four-room unit. Union suspicion was overcome in meetings with management, and indorsement of C.I.O.'s Textile Workers Union helped put the program across. The Field employees, having bought all but 25 of 1,200 units, have now paid in full.

Service and Dependability

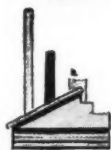
When you need industrial equipment, tools and supplies, CALL your local Industrial Distributor!

The production schedule of your plant depends on having the right tools, at the right place, at the right time. Your industrial distributor offers a single source of supply for hundreds of products, saving time, money and manpower because the...



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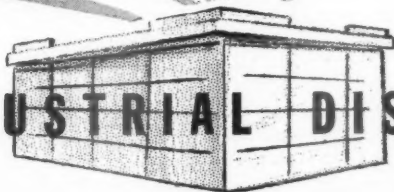
Simplified Buying resulting from combining requisitions, purchase orders, invoices and payments effect

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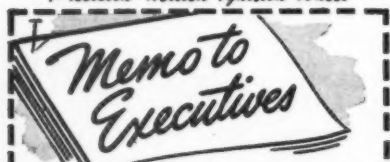
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By the Makers of Zephyr Windproof Lighters

GALTER PRODUCTS CO.
711 W. LAKE ST., DEPT. D, CHICAGO 6, ILL.

the United Auto Workers-C.I.O. bargaining committee and shop stewards following a six-week wildcat strike last fall, during which the company had canceled the agreement that required these special rates. Horst Mfg. Co., also in Detroit, suffered a \$6,000 disallowance last month for abandoning 10-minute rest periods without approval (BW—Aug. 24 '46, p108).

In these instances the employers were not aware that what they were doing constituted a "wage decrease." Chances are they might have had approval for their actions if they had sought it. But NWSB isn't saying exactly what it will sanction.

• **Commissions**—NWSB has taken a general position that it will not approve a cut in salesmen's commission rates. Where a cut may be justified, approval carries a proviso that there be no reduction in actual earnings. But NWSB is not certain of its footing on this issue.

Last spring a majority of the board refused to let Celotex Corp., Chicago, shave as much as one-half of one percent off its commission rate. Dissenting industry members wrote a critical opinion, but it hasn't been issued because the public-labor majority has not prepared its answer.

Some rate changes are the results of changes in the method of doing business or compensating employees, or of shifts in market conditions caused by wartime development of some geographic areas. Trimming commission rates was only part of Celotex's plans to alter the manner in which its salesmen were compensated. Another change would have put all commissions resulting from sales into a national pool which would be divided among all salesmen. Each salesman's participation was to be based on evaluation of previous sales and commissions and any peculiar or unusual circumstances which might surround him or his territory.

• **Meanings Wanted**—Wages or salaries of \$5,000 and under may not be cut without prior approval by NWSB. The Treasury's salary stabilization unit controls higher salaries and all salaries of executive, professional, and administrative employees not represented by a union.

But what are the chances of getting approval of a decrease? The regulations limit wage cuts to those instances where it is necessary to "correct a gross inequity" or aid in the effective transition to a peacetime economy. It is these terms which NWSB has failed to define, largely because it hasn't been pressed by many requests to date.

The definitions would state, for instance, whether an employer is cutting wages, technically, if he discontinues free snack carts, paid rest periods, attendance bonuses, or a host of other practices which grew up during war-



Part of W. Willard Wirtz' job as NWSB chairman is to help determine what constitutes a wage cut. The board hasn't fully answered that question—but so far not many employers have asked it.

time. And if these are wage decreases, under what conditions would they be sanctioned?

• **The Marginal Cases**—Last February NWSB let the Bullard Co., Bridgeport, Conn., a machine-tool company, drop a 10% wartime attendance bonus because the plan was discretionary, not an integral part of the wage structure, and therefore the company's action was not a reduction in wages.

NWSB has less than 50 wage reduction cases awaiting action. It is receiving a total of between five and ten a week. Most of them concern commissions, piece rates, incentive plans, job evaluations, promotion and merit increase systems, and such fringe matters as vacations, and rest periods.

U.E. CLAIMS VICTORY

C.I.O. electrical workers this week ended their eight-month strike in two Phelps Dodge Copper Products Corp. plants at Elizabeth, N. J., and Fort Wayne, Ind., with what the union was quick to describe as a "significant victory." Settlement terms, however, differed little from those won earlier in the year (BW—Apr. 6 '46, p104).

End of the old and bitterly fought dispute was timely for the leadership of the United Electrical, Radio & Machine Workers of America. This week, U.E. officials were busy in Milwaukee



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WHEN you start to plan a new factory it's only natural to look for a builder who has built a lot of factories.

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But have you ever considered that you might get a better factory or a better hospital from a builder who holds the unique reputation of doing *both* well?

For example, the factory and the hospital shown at the top, both now being built by the Turner Construction Company, are representative of the hundreds of industrial and finely finished institutional buildings erected by Turner.

Turner's wide *industrial experience* has proved invaluable in adding speed and economy in construction to finely finished institutional buildings. Similarly, Turner's

knowledge gained in *institutional work* has developed a class of workmanship that means longer life and less maintenance cost in industrial plants.

Whether you plan to build a factory, an office building, a hospital, hotel, school or college, Turner's experience in constructing more than 2,000 buildings of almost every type, may offer strong advantages to you and your architect.

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IN CATALYTIC WORK . . .



As a Drying Agent Moisture can cause endless trouble in processes dependent upon catalytic reactions. Production may fall off seriously, catalysts be wasted, and reactions go all wrong.

Alorco Activated Aluminas provide dependable, low dew point drying for materials entering those processes. You secure maximum production and the processes stay "on the beam". These aluminas serve year after year, so drying costs are low.

As Catalysts and Carriers Alorco Aluminas are serving the petroleum, synthetic rubber, and chemical industries as active and auxiliary catalysts, and as carriers. Their physical properties suit them to long life with continued high productive capacity. Because Alorco Aluminas are high in purity and carefully controlled in chemical content, there's less likelihood of side reactions and poisoning.

Whether your problem is one of drying or catalysis, it will pay you to investigate the use of Alorco Aluminas. We'll gladly supply your laboratory with samples for trial. Call the nearby Alcoa office, or write ALUMINUM ORE COMPANY, subsidiary of Aluminum Company of America, 1935 Gulf Building, Pittsburgh 19, Pennsylvania.

ALUMINUM ORE COMPANY



Aluminas and Fluorides

SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA

trying to work out new unity in the union's divided ranks (BW—Aug. 3 '46, p82).

There was little doubt that their job of holding rank-and-file support on the convention floor was being aided materially by the announcement by U.E. leaders that the Phelps Dodge strike, which had been turned into a crusade for all the union, had been ended with "a badly needed wage increase and improved working conditions," and with a "stronger union and a stronger contract than we ever had before."

Terms of the new agreement include—among other things—an 18½ hourly raise; a wage reopening clause; a guarantee of minimum earnings for piece workers; maintenance of membership and a checkoff of dues, but no closed shop as demanded; 1946 vacation pay and a lump sum payment of \$75 each to employees for 1946 and 1947 holidays; and company payment of union stewards for time spent in negotiating and grievance hearings.

Back Pay Specter

Retroactivity of the new wage-hour interpretations will be tested in Hercules Powder and Continental Motors cases.

Two important court suits based on the retroactivity of new broadened interpretations of the Fair Labor Standards (Wage-Hour) Act are being watched closely by management legal departments, since the cases may set a costly precedent for additional employer liability for back overtime payments.

• **Back Pay Demanded**—Suit for an estimated \$1,653,648 has been entered in the U. S. District Court at Kansas City, Mo., against the Hercules Powder Co., on behalf of Einor B. Lockwood and 100 other former employees. Bill of complaint claims the plaintiffs are due back pay at overtime rates for time spent daily in changing to required plant uniforms, obtaining tools and materials, and traveling to work areas after entering the Hercules Sunflower Ordnance shell-loading plant reservation at De Soto, Kan.

The second suit, filed in behalf of 112 production workers, past and present, against the Continental Motors Corp., of Muskegon, Mich., asks that the company be required to include extra payments to employees (such as production, overproduction, and attendance bonuses) since 1940 as a part of base pay in computing overtime. It also asks that the company be required to pay to plaintiffs the difference between overtime actually paid and overtime on the higher basis for the years since 1940. Estimates place

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Manufacturers everywhere are planning to meet sharper competition with a more appealing package. Never in our experience have we been called upon to meet so many different wrapping requirements—both for new as well as long-established products.

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the potential cost to Continental Motors at from \$2,000,000 to \$3,000,000 for all employees if the suit is sustained.

• **Travel Time at Issue**—The Hercules Powder suit, according to attorneys Robert L. Robertson, Henry A. Riederer, and Frederick J. Freel, is based on a Supreme Court decision which granted a worker compensation for time spent in traveling to work after checking into a plant (BW—May 12 '45, p. 96), and on a number of Wage-Hour Division decisions that employees are entitled to pay for time spent in dressing or in otherwise preparing for work.

Since this required preparatory work was in excess of regular working hours, the suit asks that payment be ordered on a basis of time-and-one-half for overtime. It also asks that the plaintiffs be allowed to collect double the amount due under the liquidation of damages clause of the Wage-Hour Act.

Overtime claims of the plaintiffs average \$1,250, or, doubled under the law, \$2,500.

• **High Court Ruling**—The Continental Motors suit is based on a Supreme Court decision in the Harnischfeger Co. (Milwaukee) case, in which the court decided—according to the interpretation of the plaintiff's attorney—that income from any source whatever must be considered when a company figures overtime.

Political Insider

A.F.L. proves its hold on Administration. It is upheld in its opposition to wage parley and it retains I.L.O. post.

The Administration last week moved a little further from a policy of maintaining rapprochement with the C.I.O., first by rejecting for the time being the union's proposal for a labor-management conference on a national wage policy, then by deciding that A.F.L. again would be allowed to represent American workers in the International Labor Office.

Philip Murray, president of the C.I.O., last month called upon President Truman to convene another labor-management conference, and to urge it to hammer out a new wage policy which would replace—and clear up—National Wage Stabilization Board regulations.

• **Held "Inadvisable"**—Despite current A.F.L. dissatisfaction with NWSB (page 15), the federation opposed any new labor-management parley as "inadvisable." In answer to C.I.O. last week, the Administration took the same position.

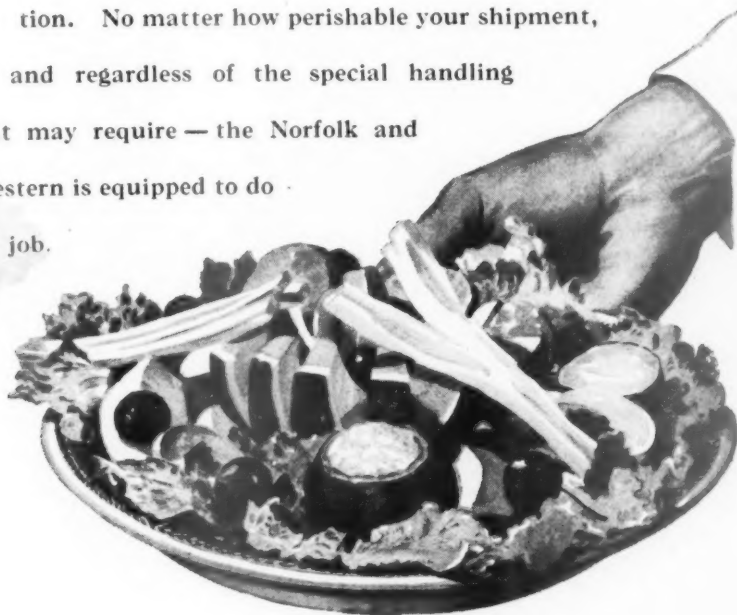
The I.L.O. situation posed an even

Fresh Foods from far places...

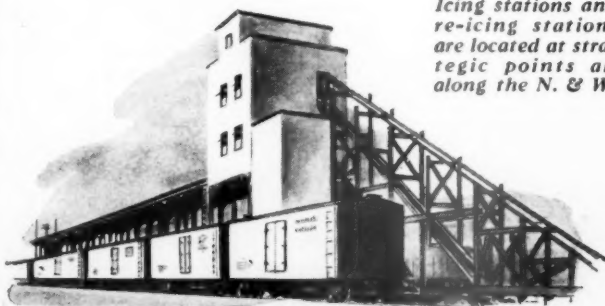


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Plumbing, heating and electrical installations and maintenance work goes faster, easier, and is less costly when a Tal's Prestal Bender is on the job. This do-all, portable machine saves valuable time, eliminates the use of fittings, and reduces welds up to 80%. It bends all iron and steel pipe and conduit from $\frac{3}{8}$ " to 3"—makes any degree bend in one easy operation without moving the pipe, without heating or filling. Does a workmanlike job—no kinks or wrinkles. No wonder thousands of these efficient machines are in successful use throughout industry, and by leading contractors. Write for bulletin.

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greater problem for the Administration. Under the organization's rules, a nation's workers are represented by a single spokesman, to come, according to I.L.O. rules, from the "most representative" labor group. A.F.L. has always represented American workers, and has jealously guarded that privilege.

• **A Rotation Suggested**—This year Secretary of Labor Lewis Schwellenbach suggested a policy of rotating appoint-

ments that would have made C.I.O. the spokesman for American workers. Such an outcry arose from A.F.L. that Schwellenbach reversed himself and announced that he had decided to recommend an A.F.L. representative. C.I.O. immediately announced it was severing all relations with I.L.O.

The I.L.O. appointment will be held in Montreal by Robert J. Watt, who since 1936 has been A.F.L.'s choice.

THE LABOR ANGLE

Control

Control over a union and union discipline—the latter a matter of vital concern to employers—is established and maintained in many ways. Some of the most effective of these ways are not always obvious. This is not an oblique reference to those extralegal methods which some union bosses use to keep themselves in office and make their power felt—such methods are well known and, sometimes, exaggerated. Some of the fully "legal" methods, however, are frequently unrecognized for the instruments of union control which they are.

Among these is the familiar union insurance and benefit system, standard in most of the old-line A.F.L. organizations but not important in many C.I.O. bodies. An A.F.L. carpenter, for example, will pay substantially more as a month's union dues than a C.I.O. auto worker. But the carpenter is paying for more than the expenses of running his union organization. A major part of his payment goes to buy for him, as an individual, life insurance, equities in an unemployment benefit fund, superannuation benefits, and other welfare protections. But all of these benefit systems are administered by his union's officers and his equities in them are maintained only as long as he is a union member.

Losses

Thus, if a group of carpenters gets dissatisfied with William Hutcheson, the boss of the carpenters union for the last 31 years, they face certain very real hazards if they try to do too much about it. For any one of a large number of reasons they can be expelled from their union, and this means that they not only lose an opportunity to work at their trade but lose as well what can amount to thousands of dollars in insurance

rights which they have purchased with their dues.

Critics of the absolute czarism which is the Hutcheson regime over the carpenters maintain that it is based on the union's insurance system. Employers who deal with the carpenters, however, have had no cause to complain about their union's lack of discipline. And companies having relations with unions comparable to the carpenters' in this regard are, also, seldom heard to complain about irresponsibility.

But now this ancient method of exerting union discipline is coming under some careful scrutiny as the result of action by the Colorado State Insurance Commissioner.

Expulsion

Last May, when the Brotherhood of Railway Trainmen struck the nation's railroads, 6,500 yardmasters who are members of the B.R.T. stayed at work. A. F. Whitney, B.R.T. president, proclaimed that "our membership rules provide for the expulsion of scabs" and orders have gone out to read the yardmasters out of the organization. A spokesman for that group charges that they will be done out of millions of dollars in insurance equities. Fifteen of the yardmasters, working in Denver, have appealed to the Colorado Insurance Commission for help, and the commissioner has promised to dig into the whole field of union insurance. Other yardmasters have already appealed for similar official action in Ohio, and Nebraska, and the movement will doubtless involve other states as well.

Threat

Thus for the first time a serious threat is developing to the use of an important instrument of union control which, employers have found, adds mightily to union discipline.

PURCHASING

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That shoe hasn't touched a dance floor yet—but it has already taken some pretty smooth steps. From raw leather to the shapely shoe on the wearer's foot . . . every step of its way was speeded and controlled by forms . . . probably Uarco forms.

In every business—large or small—these forms guide the vital steps from planning to selling. Keeping products moving to and through purchasing, production and accounting . . . from warehousing, inspection and receiving . . . on through shipping, wholesaling and retailing . . . requires hundreds of routine orders and records.

Whether these steps are efficient and economical or time wasting and costly depends entirely on you . . . and the forms you use. That's why it's well to appraise your routine operations with a critical eye . . . to scrutinize your forms and compare costs.

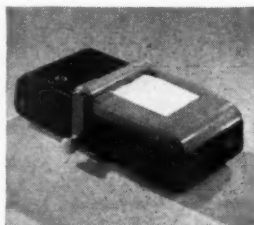
Perhaps your business is burdened with too many forms . . . perhaps its failing is too few. Often the combining of several forms into one can effect savings and greater efficiency.

There's one simple way to make sure . . . call your Uarco representative. No matter what your business may be, Uarco is equipped to design efficient forms for it—we have been designing such forms for more than fifty years. Without cost or obligation your Uarco representative will study your particular problems. Chances are he'll be able to suggest means of improving your present forms and bringing greater speed, accuracy, and economy to your routine operations.

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The UARCO Accu-Rite Register—efficient, convenient, safe. Consecutive numbering of forms provides complete and accurate control. One copy is automatically filed, safe from tampering or alterations.



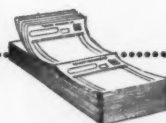
AUTOGRAPHIC REGISTERS
AND REGISTER FORMS



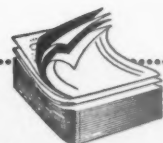
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BUSINESS FORMS



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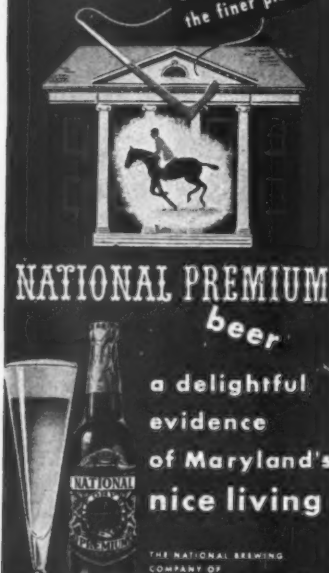
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independent beer

Not how much...
but how well

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BRANCHES IN LEADING CITIES

Peace at a Price

Passing arbitration fees
to participants is protested by
unions, but management favors
Conciliation Service's reforms.

Recent closely related moves by the U. S. Conciliation Service, designed to bolster confidence in government or government-appointed arbitrators, this week had won the general approval of management, but had encountered sharp criticism from labor groups.

Plans to pass arbitration costs on to participants in disputes were protested quickly by unions as "commercialization" of an essential federal service.

• **Goal Is Impartiality**—Stemming from last year's labor-management conference, the new steps—which set up a procedure for selecting arbitrators in wage or contract term disputes, and which end free arbitration—seek to provide a cloak of impartiality for conciliators and arbitrators (BW—Apr. 6'46, p101).

Henceforth, when the Conciliation Service is called into cases involving wages or a new contract (where often the financial stability of a company or the existence of a union is at stake) the service will recommend to disputing parties a list of three, five, or seven arbitrators approved by a labor-management advisory committee in their region. Disputants then will be required to choose one of those recommended, and to share the arbitration costs. In minor cases based on day-to-day grievances, the Conciliation Service, on request, will name the arbitrator—but the disputants still will pay him.

• **Storm of Protests**—Announcement of the new policy brought a storm of protests from unions. The International Assn. of Machinists—one of the Conciliation Service's biggest customers—was the most outspoken, charging that unions could be "arbitrated to death" by employers better able to withstand the cost of arbitration.

Although Edgar L. Warren, director of the Conciliation Service, assured I.A.M. that the service would continue to pay arbitration expenses for any union not able to do so, the promise did not dent the opposition. I.A.M. threatened to boycott the federal disputes agency, and to use instead private agencies "with more latitude."

There was little likelihood, however, that the protests would bring any reversal in the program.

The service's full-time staff of twelve arbitrators was recently dissolved (BW—Jun. 22'46, p90) and free arbitration, as distinguished from conciliation, discontinued except in particular cases where there may be justification for making

an exception. There also had been 14 arbitrators paid on a w.a.e. (while actually employed) basis, making a total of 26.

• **More Men Available**—Now all arbitrators will be on w.a.e. and they will be on a list certified by the Conciliation Service's arbitration director, who will consider recommendations of the regional labor-management advisory committees in preparing the list.

The number of arbitrators will be larger than the 26 previously available, somewhere around 75 or 100, because of an increase in arbitration cases expected to result from the changed policy. At the same time the list will be kept down to a reasonable number in order to assure enough work to the arbitrators to make it worthwhile to keep up with what's going on in the field.

Arbitration cases have been running about 30 a week.

• **Advisory Only**—The regional labor-management advisory committees were named primarily to examine the qualifications of men who want to do arbitration work and determine if they are



REVEILLE FOR BANDSMEN

A mass demonstration by striking A.F.L. musicians outside the Hotel Waldorf-Astoria nearly fizzled when Manhattan bandsmen (accustomed to daytime slumber and night work) stayed in bed. Richard McCann, local president, headed the picket line; other nattily clad unionists bolstered the line as the afternoon waned. Strikers, asking increases up to 50% (BW—Aug. 24'46, p101), succeeded in barring bands, records, juke boxes, other music in some 45 hotels. No effort was made to stop hotel personnel, but patrons were urged to go elsewhere. Many, like the Soviet's Andrei M. Gromyko, ignored the pickets.

HOW "HEAVY" IS A TON OF

AIR

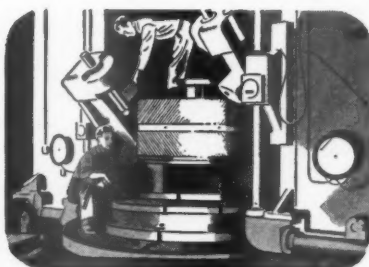
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IN ALL SORTS of industries today, AIR has become the "heaviest" single factor in determining costs. For without absolute control of the atmosphere, some of our finest products would be far too expensive to make—if not completely impossible.

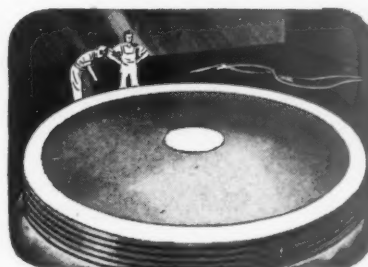
Such widely diverse things as electronic tubes, high precision machinery, optical glass, Nylon yarn—all depend on proper air conditioning in almost every step of their manufacture. And Sturtevant has engineered hundreds of air conditioning systems to meet just such requirements. Let's look at a few examples—



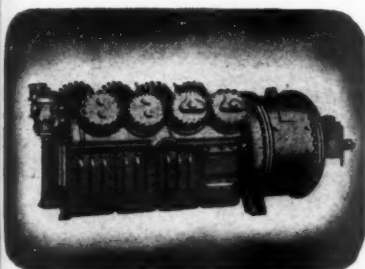
1. Scarce as they are, Nylon stockings would be completely non-existent if it weren't for air conditioning. And the same goes for rayon. Variations of temperature and humidity in the spinning rooms can cause the viscose solution to crystallize and break the thread. Proper air conditioning prevents this—pays for itself many times over in smoother production.



2. Cutting these huge gears to extremely close tolerances is a 17-day job. And the "weather" has to be kept exactly the same every minute of that time, to insure the fine accuracy required. That's why Sturtevant air conditioning is at work in each of the 25 "hobbing" rooms of this large plant. Result? Practically no rejects, and thousands of dollars saved.



3. Imagine a glass so sensitive that the slightest heat radiation from the walls would distort it! That was the problem in grinding this 200-inch mirror for the world's largest telescope. The solution? Complete air conditioning to keep temperature constant, humidity low. And as a result the job was finished six years sooner than had been estimated.



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By **EUGENE L. GRANT**
Professor of Economics
of Engineering, Stanford
University

acceptable to both management and labor. The committees are advisory only and will make recommendations, expected to be followed in most instances.

Inasmuch as the committees are composed of a public member and two representatives each of the U. S. Chamber of Commerce, National Assn. of Manufacturers, A.F.L., and C.I.O., there may be instances where one group may have an objection to a candidate which the Conciliation Service feels is insufficient to disqualify him. In such cases the individual might be certified despite the lack of a unanimous recommendation.

Warren is toying with the idea of keeping the committees on a standby basis to advise the regional director of conciliation, even as the national committee established by the labor-management conference advises Warren.

Management members of the regional advisory committees are:

Region I (Boston)—Walter P. Knauss, secretary-manager, Manufacturers Assn., Hartford County, 612 Capitol Ave., Hartford; J. R. Jackman, Rumford Press, Concord, N. H.; Edward Dana, president-general manager, Boston Elevated Ry., Boston; James C. Winn, executive secretary, Chamber of Commerce, Woonsocket, R. I.

Region II (New York)—Arthur M. Torrey, secretary, Employers Assn. of North Jersey, 30 Central Ave., Newark; R. K. Heineman, attorney, Aluminum Co. of America, Pittsburgh; Rudolf Vogeler, manager, Industrial Council, Philadelphia Chamber of Commerce and Board of Trade, Philadelphia; H. R. Burbank, executive vice-president Rockwood & Co., Brooklyn.

Region III (Cleveland)—R. J. Mason, secretary-manager, Muskegon Manufacturers Assn., 872 Second St., Muskegon, Mich.; Thomas S. Markey, assistant counsel, Firestone Tire & Rubber Co., Akron; Ray M. Suter, director of industrial relations, Chamber of Commerce, Columbus; Louis Ruthenburg, president, Serval, Inc., Evansville, Ind.

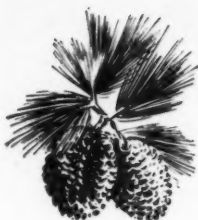
Region IV (Atlanta)—Frank A. Constangy, general counsel, Industry Advisory Council, Atlanta; T. C. Moore, secretary-general counsel, T. H. Hanes Knitting Co., Winston-Salem 1, N. C.; A. J. Sarre, secretary, Employer-Relations Division, New Orleans; Edward J. Robeson, Jr., vice-president, Newport News Shipbuilding Co., Virginia.

Region V (Kansas City)—C. B. Evinger, general personnel superintendent, the Fairmount Creamery Co., Omaha; Thomas W. Moore, industrial relations director, Humble Oil & Refining Co., Houston; W. M. Rand, president, Monsanto Chemical Co., St. Louis; W. A. Klinger, W. A. Klinger Co., Sioux City.

Region VI (Chicago)—W. H. Mac-

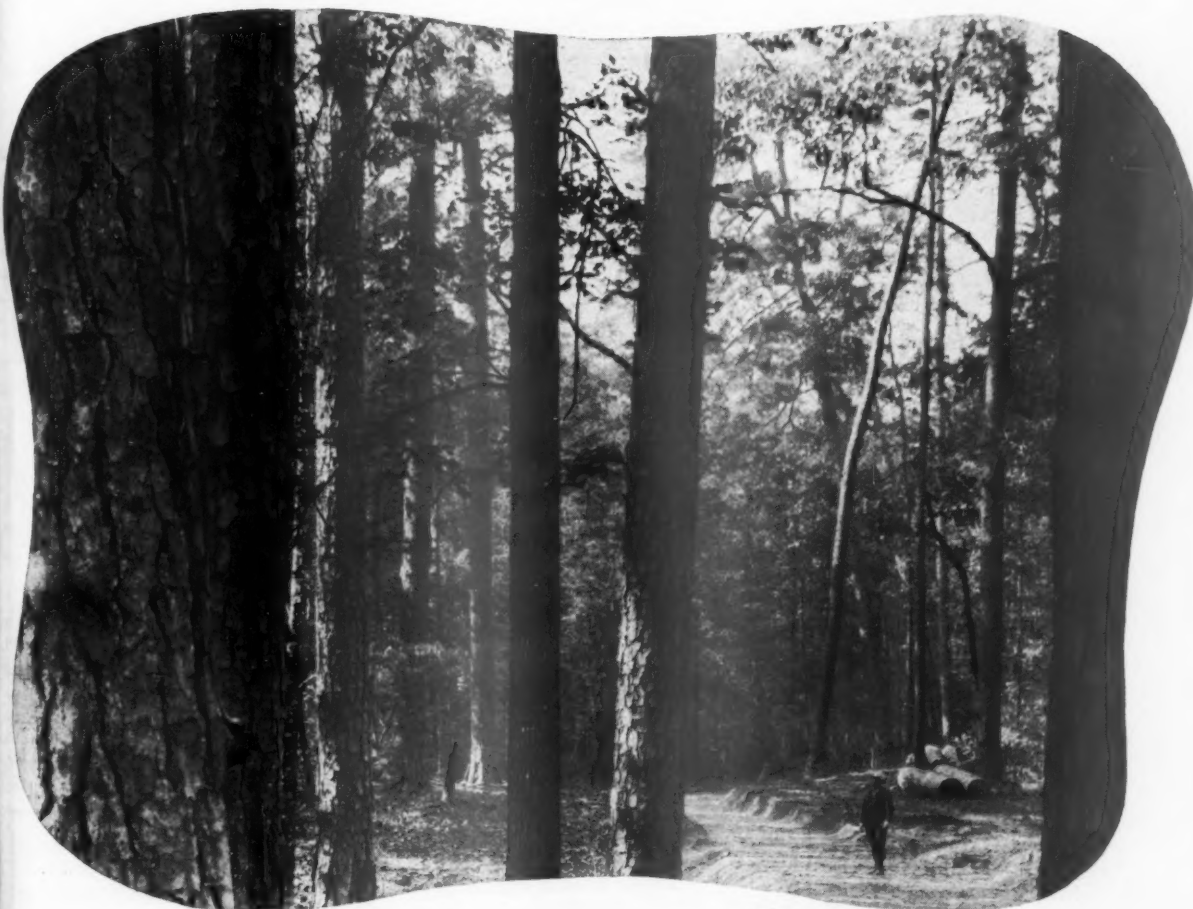
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Mahon, executive secretary, St. Paul Committee on Industrial Relations, 1616 Pioneer Building, St. Paul; Lawrence Combs, director of industrial relations, Container Corp. of America, Chicago, Ill.; F. Eakin, vice-president, A. E. Staley Mfg. Co., Decatur, Ill.; W. Homer Hartz, president, Morden Frog & Crossing Works, Chicago.

Region VII (San Francisco)—H. D. Hailey, secretary, Washington Metal Trades, Inc., 813 Central Building, Seattle; A. B. Tichnor, director of industrial relations, Matson Navigation Co., 215 Market St., San Francisco; Paul C. Smith, editor-general manager, the San Francisco Chronicle, San Francisco; James P. Rogers, executive secretary, Western Woods Employers, Portland, Ore.

MORE CARS FOR WORKERS

Dissatisfaction with export manufacturing schedules which auto workers believed were affecting the number of cars available for domestic marketing—and for employee purchasing—recently precipitated a shutdown at the Nash Motors Division of the Nash-Kelvinator Corp. in Kenosha and Milwaukee, Wis. (BW—Sep. 7 '46, p. 38). Last week the Nash employees emerged the winners.

Members of C.I.O.'s United Auto Workers quit work on Nash automobiles coming down the assembly line with right-hand drives, thus identified as being for foreign markets. The resulting confusion led to a plantwide shutdown which idled 12,000 employees.

Workers protested that exports were cutting the number of cars available for domestic salesrooms and for employee purchasing. Nash had been setting aside eleven automobiles a week for employees.

Company officials replied that less than 10% of the Nash output is consigned abroad, and that this is necessary (1) to safeguard the company's future total business against growing foreign competition, and (2) to provide exchange for purchases of foreign materials.

Officials met with U. S. conciliators and union representatives to work out a settlement. Employees henceforth may purchase 17 cars a week if manufacturing schedules are maintained at or above 500 units a week.

P. S.

Metropolitan New York, which already this year has weathered paralyzing tugboat and railroad strikes, this week found a walkout of 12,000 A.F.L. truck drivers (BW—Sep. 7 '46, p. 93) posed an even greater threat to the public welfare. Negotiations between employer associations and three striking local unions were stalemated at midweek, but with food stocks running low emergency steps



FENCE MENDER

Much of the job of recouping C.I.O. losses and regaining West Coast prestige after the recent cannery defeat by A.F.L. (BW—Sep. 7 '46, p. 84) will be up to a newcomer on the coast—Irwin L. DeShetler (above), appointed director of the newly created southern California district. DeShetler already had been given a tough assignment when Philip Murray, C.I.O. president, divided California into northern and southern regions, reducing by half the jurisdiction of Harry Bridges, leftist former state director. Murray said it was to “strengthen organization,” but those who had observed gathering opposition in southern California to Bridges’ policies saw DeShetler’s appointment in a better perspective.

were taken to get union-approved trucks moving with essentials. But industrial layoffs mounted; newspapers eliminated ads and reduced pages.

The Foreman's Assn. of America (BW—Sep. 7 '46, p. 86) this week scored a major victory (741-417) in an NLRB poll of supervisory employees at five Chrysler Corp. plants in the Detroit area.

Pittsburgh still had lights this week, but by reprieve only. After other steps to avert a new strike by an independent power plant union failed, city officials obtained an injunction which (1) barred the union from striking, (2) ordered the Duquesne Light Co. to resume contract negotiations.



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AGE

THE INTERNATIONAL OUTLOOK

BUSINESS WEEK

SEPT. 14, 1946



Washington's stiffening diplomatic policy toward the U.S.S.R. is beginning to produce results.

Business Week's correspondent in Berlin reports this week:

"Byrnes' bold Stuttgart speech, following the disappointing showing of the Communists in the Russian zone elections, is expected to force the U.S.S.R. to be more cooperative—at least at the economic level.

"But, rather than make any sudden formal move for closer economic unity among all zones, officials here expect Moscow to increase bilateral action permitting gradually freer trade between Russian and other zones.

"American and British control officials were surprised this week to find the Russians so desperate for steel they are offering wheat in exchange."

Watch Washington's next moves closely.

The U. S. momentarily holds the advantage in the Two-World diplomatic jousting.

Moscow is impressed by the show of U. S. naval power in the Mediterranean, the boldness and vigor of U. S. maneuvering in the Near East (Greece, Turkey, Saudi Arabia), and the determined moves now being initiated by Washington to force a showdown on German policy.

The Russians realize that in an all-out test of strength in Germany, tremendous forces—both economic and political—are behind the western powers.

Odds now favor grudging Soviet backtracking to avoid a break in the United Nations front.

But nothing like wholehearted Russian cooperation is even remotely in sight—in Berlin, or elsewhere.

Rushing U. S. businessmen into Germany to negotiate orders for German goods is part of Washington's offensive against the Russians.

The Reich desperately needs U. S. supplies.

Until it can sell something to the U. S., the country lacks the means to pay for imports.

Production of nonmilitary goods is mounting in Germany.

Washington is now sending 95 U. S. executives a month to the Reich to view samples of goods which can be exported (page 114).

Cameras head the list of potential exports, though U. S. radio manufacturers are ready to place orders for 50,000 radio cabinets.

Washington is also carrying its economic offensive into the Balkans.

Alarmed at mounting instability in Greece, despite the conservative election outcome, the Greek Economic Mission in Washington has been promised more cotton textiles, coal, transport equipment, and ships.

Also, technical experts are likely soon to be added to the "export" list to help speed economic rehabilitation. A stable regime would be a barrier against Moscow-inspired Albanian and Bulgarian territorial claims on Greece.

Look for an intensive drive by Washington officials to dramatize the importance of the Middle East.

In the momentary slowdown of the government's political lending program, exceptions will be freely made in the Eastern Mediterranean area.

U. S. officials have traditionally shied away from this accepted British sphere of influence. But today a dramatic change in Washington's planning is

THE INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK
SEPT. 14, 1946

forced by the strategic value of the enormous oil deposits, plus the growing realization that Moscow can most easily be held in line if this soft underbelly to the Soviet Union is economically strengthened and kept friendly to the western powers.

London is bowing to the leadership of Washington in this latest challenge to Soviet diplomatic aggressiveness.

Anglo-Soviet trade talks, which started so optimistically (BW—Jul.20 '46,p108), are bogging down with few concrete deals in sight.

And to maintain a solid Anglo-American economic front, Hugh Dalton, Chancellor of the Exchequer, will soon arrive in the U. S. While this has not yet been made public, he is coming for intensive discussions with U. S. Treasury officials and leaders in the American financial community.

During these conferences with Dalton and other British officials who will come in a steady stream during the winter, you can expect a full airing of U. S. grievances against recent British moves continuing wartime trade restrictions.

Part of Washington's diplomatic offensive calls for an aggressive drive to develop the International Trade Organization, envisioned as an adjunct of U. N. and a foundation for U. S. economic leadership.

Further deals like the bilateral Anglo-Canadian wheat agreement (BW—Sep.7'46,p95) will be contested, along with the European trend toward two-country, semibarter trade pacts.

But, until the strike wave in the U. S. passes and the production of essential machinery and transport equipment is in full swing, Washington's bargaining effectiveness will be limited.

Britain's potential as a market for U. S. supplies will get a boost when London's new Excess Profits Tax Advisory Panel gets into full swing.

Established to pass on the legitimacy of demands by individual companies to draw on a total of nearly \$450 million of accumulated funds if each can prove that it is spending the money to "develop and reequip" a plant, the Advisory Panel started to function on Sept. 1.

Since many of the industries have already been window-shopping in the U. S., concrete orders are likely to be placed as soon as each company's program for rehabilitation is approved.

Despite the disappointing experience of important chemical interests in India in winning enough support from their government to overcome the resistance of British exchange control authorities to the placing of large orders in the U. S. for new equipment, four important Indian buying groups are now scouting the U. S. market.

Members of the All-India Manufacturers' Organization are shopping for machine tools, aircraft building equipment, textile machinery, electrical equipment, paper manufacturing machines, and pharmaceutical production subcontracts.

"Handbook of Brazilian Corporations—With a Directory of Directors" has just been published by Gerard O. Banaskiwitz, in Sao Paulo.

The book gives valuable trade information on 4,500 companies, and lists 35,000 directors.

BUSINESS ABROAD

Hawaiian Sugar Workers Idle

Harry Bridges calls 25,000 out of cane fields and crushing mills in demand for 65¢ minimum cash wage. Cuban and Puerto Rican planters fear they are next on union's list.

Harry Bridges' left-wing International Longshoremen's & Warehousemen's Union (C.I.O.) last week called 25,000 Hawaiian sugar workers out of cane fields and crushing mills in an industry-wide strike against suppliers of 10% of the total sugar consumed annually in the United States. More important to U. S. consumers, the wily president of I.L.W.U., with expansive ideas, moved quickly to solidify the union position by mobilizing Cuban and Puerto Rican workers behind the walkout.

• **Housing Involved**—Basic issue in the Hawaiian strike is an I.L.W.U. demand for a 65¢ minimum cash wage, over and above such things as housing, medical attention, fuel, and water, which employers now furnish. The basic wage is now 43½¢ an hour, and the industry has offered 50¢. Employers in the Hawaii Sugar Planters Assn. also have offered to pay 15¢ an hour more if relieved of responsibility of providing free housing and other present services.

I.L.W.U. a year ago succeeded for the first time in negotiating an industry-wide contract for the sugar workers, employed by 31 of the territory's 32 plantations. The union won a 15% wage increase for workers, to lift the minimum from about 38¢ an hour.

• **Union Shop Demanded**—Other issues in the current tie-up include a demand for a 40-hour field week (instead of the present 48 hours) and for a union shop clause. A fourth demand, for joint employer-union administration of funds set aside by employers for the perquisites (the housing, etc., furnished to employees), hinges on whether the old practice of providing free services is abandoned in favor of a higher wage.

That was done in I.L.W.U. bargaining for Hawaiian pineapple workers earlier this year. In strikeless negotiations the pineapple workers won a 65¢ hourly minimum and an additional 15¢ an hour in lieu of the perquisites.

Backing up the sugar strike is the strongest union organization ever achieved in the territory. Walkouts have been attempted by local unions in the past, but the diversity of languages made them generally unsuccessful.

• **A Selling Job**—I.L.W.U. prepared for its strike call (finally voted 13,949 to 125) by sending interpreters into the

field to set the stage for the strike by explaining the job of striking.

Thrifty Filipinos had to be convinced that higher wages would offset a temporary loss of pay. Food stocks had to be accumulated (with I.L.W.U. funds) and committees had to be set up to continue operating plantation utilities and other services furnished by employers. Sugar planters in earlier strikes were able to break down union lines by threats of evictions, by suspending the perquisites on which strikers relied.

Meanwhile, the Hawaii Sugar Plant-

ers Assn. estimated demands made by the union would cost the industry \$21,000,000 annually. Last year's net earnings, figured on this year's tax rates, would be about \$4,500,000, according to the industry, which said, however, that it is willing to give workers an aggregate \$5,000,000 boost.

• **Against Price Hike**—Boosting sugar prices would not be a solution, the association contends, because it would (1) endanger the Hawaiian industry's competitive position, and (2) throw out of balance the present subsidy program.

As far as the planters are concerned, timing of the strike is to their advantage. Most of the cane was harvested and crushed by Sept. 1, when the strike was made effective. Only a lengthy strike, more than 60 days, would pose a real financial threat. But if the stoppage continues into the fall, young cane—basis of the 1947 crop—might be endangered.

While currently most concern centered in the Hawaiian branch of the industry, sugar growers in two larger areas—Cuba and Puerto Rico—watched anxiously what might be first signs of de-

SOVIET STRIP

Ripped from the power plant of Germany's Gendorf Anorgina chemical plant (below), equipment by the trainload (right) heads for the Soviet Union—evidence that Russia's ideas of reparations are completely realistic. Dubbed war potentials, many units like these are helping to put Russian industry back on its feet—admittedly at the expense of Germany's economy. Early stripping was reported to be indiscriminate, with Russia returning some light machinery which in German hands might produce goods suitable for reparation payments.



velopment of a sugar workers union bloc, guided by Bridges, which would include their hands. When Bridges conferred in New Orleans recently with Miguel Diaz and Felix Perez, executive board members of the Cuban Federation of Labor, and Juan Saez Corales, representing sugar and other workers in Puerto Rico, the American labor leader said his goal was financial, moral, and political support for the Hawaiian workers. I.L.W.U. wanted to be sure, he said, that "sugar interests" operating in both widely separated growing areas would not play one against the other to break the Hawaiian strike.

• **Planters See Threat**—But the Cuban and Puerto Rican employers are not at all sure that Bridges has given the whole story of the conference. Wages paid their employees are well under the Hawaiian rate even without a further raise (reported to be around 26¢ an hour as compared with the present Hawaiian 43½¢) and workers generally put in ten hours a day in the fields.

Bridges recently was outspoken about the need for joint and concerted action to force sugar planters, and mill and refinery owners, "to abandon their present universal practice of imposing a system of colonial slavery on sugar workers . . . by substandard wages and working conditions."

That statement, coupled with an announcement that future meetings of sugar union leaders are contemplated in Cuba, and with a significant comment that "January seems to be an important month for sugar" in Cuba, was taken by Caribbean operators to pose a threat to their future operations.

Seek Italian Silk

Westinghouse Import scouts foreign sources of luxury type material for U. S. market. Many other items already available.

Westinghouse Import Co., war-established division of Westinghouse Electric International Co., is following up its plan to buy products abroad and market them in the United States (BW—June 1 '46, p113) by sending a representative to Italy with construction samples from U. S. silk houses.

American silk manufacturers, lacking machinery and trained personnel, are reluctant to go back into the luxury market and will concentrate on the manufacture of plain silk crepes. But dress and neckwear silk designs suitable to the American market, if they can be supplied by Italian manufacturers, would be welcome here.

• **Overseas Suppliers**—The import company has on display for the consideration of American wholesalers products from Italy, Mexico, England, Peru, Australia, India, Denmark, Belgium, Haiti.

Products now in the showroom include glassware, pottery, alabaster lamps and bowls, brasses, silverware of all types, linens, scatter rugs, hand-tooled leathers, woolens, and handbags. Nearly 75% of the items shown are being manufactured and either are in stock or will shortly be available. Orders will be given for the manufacture of sample items if

they show promise of fitting into the American market.

• **Planned to Taste**—As the plan develops, foreign manufacturers in the countries mentioned as well as in other parts of the world will be supplied with ideas and patterns developed by American stylists and designers.

Among the products for which definite distribution has been planned is a tennis court surface material from England, so treated that the court can be used within fifteen minutes after a summer shower.

Plant Seizures

Mexican workers take over du Pont subsidiaries' dynamite factories in Durango, demand nationalization of industry.

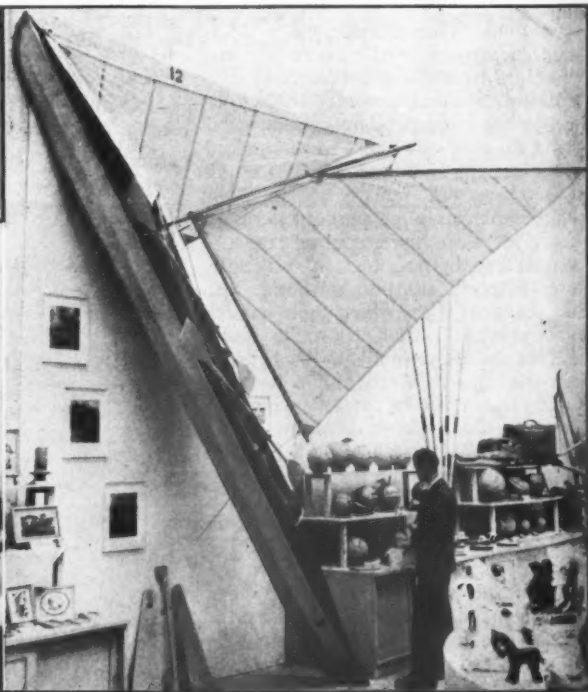
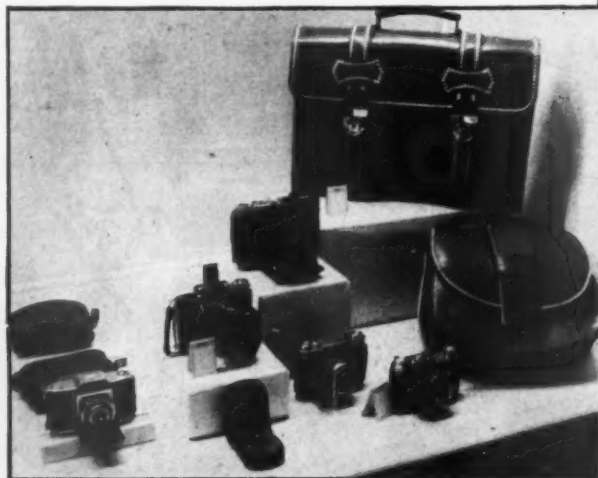
MEXICO, D. F.—The struggle between Mexico's union of dynamite makers and two local du Pont subsidiaries—Cia. Mexicana de Explosivos S. A., and Cia. Mexicana de Mechas Para Minas S. A.—which the Durango state government recently declared had been settled through a pay increase, has suddenly taken a serious new turn.

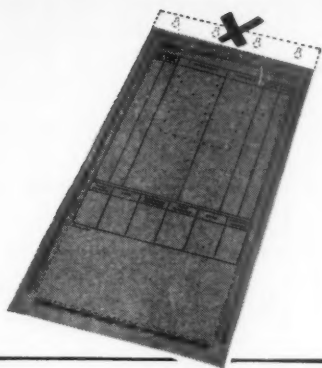
Striking workers last week seized the factories and offices of the two companies, expelled the technical staff, and requested President Miguel Aleman to nationalize the industry.

• **Wage Dispute**—Trouble in the industry started on July 24, when the companies refused to grant a 75% wage in-

GERMANY BIDS FOR WORLD TRADE

Displays of cameras, leather goods, and toys at Munich and Stuttgart indicate what Germany hopes to export to rebuild her economy. Secretary Byrnes recently attended the Munich exhibit; next are expected U.S. trade missions, invited to come—and buy (BW—Aug. 31 '46, p95).





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J. MILLER WALKER
Secretary

August 27, 1946

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crease requested by their workers after the price of their products had been raised. The workers then started a slow-down strike which, the companies say, brought the output down from 900 cases a month to 60. On Aug. 23, when the companies expelled seven workers considered to be the main troublemakers, the employees retaliated by seizing the plants at Dinamita, Durango, and occupying the companies' Mexico City headquarters.

Since the seizure, the workers have been running the factories haphazardly and selling their production to the public. They assert that the companies—which for all practical purposes are the only dynamite producers in Mexico—had deliberately fostered a black market by selling all their output to a private firm, which in turn sold it to users at twice the factory price.

• **Imports Asked**—Meanwhile, mining company officials are complaining that they have to purchase their dynamite in the black market at 42 pesos per kilogram (instead of the usual 16 pesos) and have been petitioning President Aleman for permission to import dynamite from the United States. The Fresnillo Mining Co. informed the Mexican government that it will have to suspend operations in two weeks, when its stock of explosives will be exhausted, unless imports are permitted from abroad.

President Aleman will probably have to arbitrate the dispute, which is now in the hands of the labor minister.

AIRLINE IS MEXICANIZED

MEXICO, D. F.—Yielding to government pressure to make room for Mexican interests, Cia. Aerovias Braniff, S. A., Mexican subsidiary of Braniff Airlines, has become an autonomous Mexican-controlled company.

Reorganization was expected by increasing capital stock from one million to twenty million pesos (about \$4 million), almost all of which was subscribed by Mexican capitalists, and by opening the directorate to influential Mexicans.

Of nine members of the board of directors elected a week ago, eight are Mexicans, including Miguel Lanz Duret, owner of the Mexico City daily El Universal. Only one, Thomas E. Braniff, is a U. S. citizen.

New president of the company is a Mexican lawyer, Alfonso Guzman Neira. Among the managers are three American vice-presidents—Thomas E. Braniff, Gen. Elmer E. Adler, and Douglas Stockdale—and one Mexican, Angel Tavera.

This new arrangement is expected to place Braniff in a better bargaining position in its negotiations with the Mexican government for an important share in domestic air routes.

Mexican air interests pointed out that a similar move has recently been made in Brazil by Panair do Brasil. In that case, Brazilian capitalists subscribed most of the \$1 million additional funds in a boost of capitalization from \$4 million to \$5 million.

CANADA

Air Agreement

Canada and Australia get together on new plane routes, but U. S. pact is necessary if San Francisco gets service.

OTTAWA—Completion of an air transport agreement between Canada and Australia, recently announced here and at Canberra, promises to create an unusual situation in Pacific air services, since Australia has as yet no similar agreement with the United States.

• **An Extra Ride**—When Australian planes start operating between Sydney and Vancouver within the next few weeks they will stop at San Francisco both going and coming. A traveler from Australia wanting to go to San Francisco, however, will have to ride on to Vancouver and buy another ticket back; a passenger at San Francisco will have to go to Vancouver to board a plane for Australia and fly back over the California City.

Announcement of the Australian-Canadian agreement, long in negotiation, brought to light difficulties between Washington and Canberra over terms of a traffic agreement. The trouble arose from the Australian desire to have services pooled equally, or on some agreed basis between the operating lines of the two countries, and from American reluctance to apply more control than necessary to international air transport.

• **What Australia Wants**—Australia has the right to land on U. S. territory but not the right to discharge or take on passengers here. Terms of the Canadian agreement give an indication of what the Australians want to get in their deal with the United States. It specifically assures each country an equal share in traffic. Capacity is to be related to traffic. Tariffs will be agreed on between the two governments. A pooling arrangement under which either airline may exercise any of the rights of the other while the two would share receipts is contemplated but not spelled out in detail.

Familiarization flights on the Australian end are to begin almost immediately by way of Fiji, Canton Island,

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ONLY THE NAME IS WRONG

Historian and author with a string of academic degrees, Humphrey Hume Wrong (above), Canada's new ambassador to the U. S., combines the polish of the old-line statesman with the practical experience of the career diplomat. He came to Washington nearly 20 years ago as first secretary to the Canadian legation after teaching at the University of Toronto—his native city. Following a two-year stint as Canada's delegate to the League of Nations, he moved to London in 1939, returned to Washington in 1942 as minister counsellor. Lately he has been associate under secretary for external affairs in Ottawa.

Honolulu, and San Francisco. Initial operations are to be conducted by Australian National Airways Proprietary, Ltd., under contract with British Commonwealth Pacific Airlines, Ltd. The latter company is the designated Australian operator and is jointly owned by the Australian, New Zealand, and British governments.

• **Route Not Settled**—The designated company for Canada will be the government-owned Trans-Canada Air Lines, but the Canadian operation is not to begin until well in 1947, the date depending on TCA's equipment deliveries and completion of arrangements for intermediate stops. The exact route to be followed by TCA has not been settled, but it is presumed it will run directly over the Pacific from Vancouver with no stop in continental United States.

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THE MARKETS (FINANCE SECTION—PAGE 68)

Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial	140.9	150.2	175.8	154.5
Railroad	47.6	50.5	61.5	55.6
Utility	72.8	77.0	90.5	72.4
Bonds				
Industrial	123.7	124.6	123.3	120.8
Railroad	115.5	117.1	117.8	114.2
Utility	115.3	115.6	115.3	115.4

Data: Standard & Poor's Corp.

Bonds Sell Off Sharply

As might have been expected, corporate bonds of investment grade have displayed some easing tendencies on occasion since the stock market started to retreat from its 1942-46 bull market highs late last spring.

Where this group has been concerned, however, the tobogganing of stock prices, especially during this month, has uncovered no alarming symptoms to date. Instead, such declines as have been seen appear actually to have resulted largely from the recent hardening of interest rates.

This is not surprising. Such strongly secured bonds, due to their low yields (under 2.55% last week, according to Moody's "AAA" corporate bond yield average) and absence of speculative characteristics, rest mainly in the portfolios of the large nontrading investor, who usually has purchased them for holding until maturity.

• **Different Picture**—In the case of the less-than-investment-grade bond issues, however, the recent picture has been

different. It is normal for such bonds to be influenced by what is happening in the stock market, and lately they have been sticking close to precedent. In fact, many started to move slowly to lower levels some weeks before the stock market finally decided the 1942-46 bull market party was over (chart).

Only where second, and lower, grade rail bonds have been concerned has the situation assumed serious proportions.

Members of that vast group actually reached their bull market peaks some time before stocks as a whole did, and soon after the 1945 year end the earlier avid desire to buy such bonds was conspicuously absent.

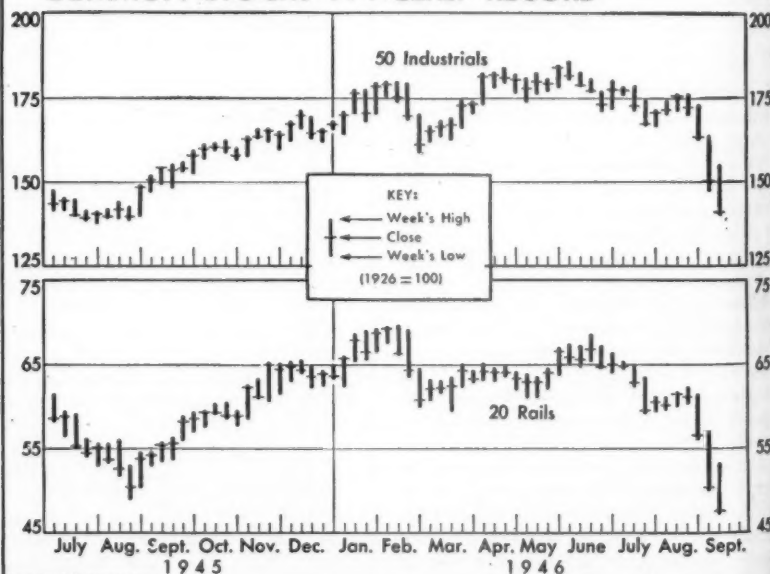
This resulted from more than the fact that stocks had begun to appear more attractive to new security buyers. Another equally potent factor was that stocks had begun to appear more interesting to owners of rail bonds who had been looking for an excuse to cash in some of the huge paper profits long available on such holdings.

• **A Particular Target**—Because of this factor, the group was ripe for "taking" when the selling psychology which was gaining dominance in the stock market this summer began to overflow into the bond-trading section of the Big Board.

A particular target, because of its spectacular earlier price rise, was the defaulted rail bond group. As a result, Standard & Poor's price index has lately slumped more than 20% under its 1946 peak, and many individual losses run within the 30%-40% range.

Mid-September also finds many erst-

COMMON STOCKS—A WEEKLY RECORD



Date: Standard & Poor's Corp.

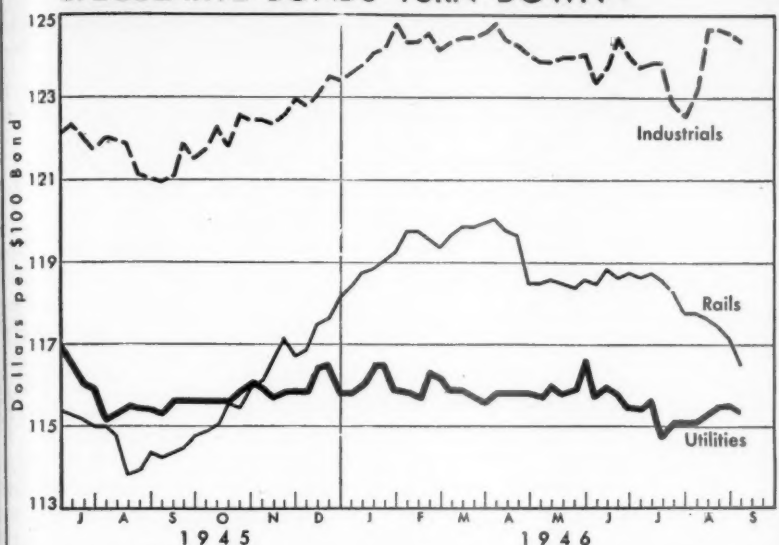
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SPECULATIVE BONDS TURN DOWN



Date: Standard & Poor's Corp. Medium-Grade Bond Averages.

© BUSINESS WEEK

while speculative interest-paying rail favorites selling as much as \$160 to \$330 per \$1,000 bond below their 1946 highs. Much smaller losses are evidenced by those medium-grade bonds with a smattering or more of investment characteristics in their make-up. Even among such, however, many are now selling 9% to 17% under earlier 1946 levels.

• **Doldrums**—Until the recent spill in stocks began to accelerate the action of the bond market, the latter, despite the steady price downtrend in evidence so much of the time, probably represented Wall Street's most inactive sector. Early July, in fact, saw trading in bonds at its slowest pace in more than two decades, and last month produced the smallest total of New York Stock Exchange bond transactions since August, 1917.

There are a number of reasons to account for this condition. For one thing, the Big Board's bond listings have shown a persistent contraction since 1931, and recently had reached their lowest level since 1908. And the loss of virtually all its once large dealings in governments to the over-the-counter market in recent years hasn't helped.

An even more potent recent factor, however, has been the sharp falling off in the demand for rail bonds. The latter not only comprise the largest single group of bonds enjoying Big Board listing but, according to Street estimates, normally provide up to 80% of that trading arena's bond turnover.

Governments Act Up, Too

Despite the great difference in the intrinsic value of the securities, and the type of market participants involved,

the recent sharp price weakness uncovered in stock trading hasn't been without some repercussions on the government bond market.

This week, and earlier this month, sharp weakness has characterized a number of the Treasury issues in more than one instance. Particularly hit have been the Victory Loan 2½s of 1967-72.

• **For Example**—Monday of this week saw that issue slide off as much as 17/32, the widest daily price drop it has registered since issuance in late 1945. Those bonds closed that day at around 101¼% of par, compared with their earlier 1946 high of 106 17/32 during the first few days of this year.

Sharp price weakness was similarly evidenced then in the bank-eligible long-term 2½s and shorter term 2s. Both, in fact, moved into new 1946 low ground.

Traders report that some of this week's offerings appear to have originated in quarters having funds only temporarily invested in governments, and to have been more inspired by uncertainties engendered by the blue stock market picture than by any recent firming of interest rates.

• **Never Alarming**—However, selling pressure never assumed any alarming proportions that day, and many of the declines marked up by closing time are said to have been due to cautionary mark-downs in bids by dealers. Washington is showing no signs of worry.

At the same time, it was also noticeable early this week that the declines recently chalked up had caused little increase in purchases of, or interest in, the Treasuries involved. This, moreover, was despite the fact that at the close of trading on Monday the Victory Loan 2½s, for example, were obtainable on a 2.40% yield basis.

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THE TREND

STOCK MARKET BREAK AND BUSINESS PROSPECTS

Question: Is the recent break in the stock market necessarily a harbinger of a major downswing in the volume of business activity in a few months?

Answer: No.

Question: Then was it just a dizzy performance which bears no relation to underlying economic realities?

Answer: No.

Question: Then is this one of those cases where the stock market may not be a reliable forecaster of general business conditions in the near future?

Answer: Yes.

In the paragraphs which follow, we shall amplify the categorical answers we have given to these engaging questions.

• In the minds of some observers the break in the stock market is a complete mystery. For example, the New York Times, at one point, reported it as a break which "lacks visible causes." In so doing it noted the strength in all of the underlying economic factors which the stock market is commonly presumed to reflect.

A variant of the mystery theory of the break is the conspiracy theory advanced by Rep. Adolph Sabath of Illinois who sensed a raid by short sellers, said there must be a political motive behind it, and called upon the Securities & Exchange Commission to expose the culprits. Until the commission reports, final judgment on this possibility must be withheld. But, in the meantime, Chairman Caffrey of the commission is on safe ground in pronouncing it "extremely unlikely" that short sales by the parties suspected by Sabath account for the break.

Even if the conspiracy theory blows up, as we believe it will, we still think it is possible to account for the break on rational terms. Among the elements of such an explanation which have been stressed by some are the dramatically deteriorating course of relations between the U.S.A. and the U.S.S.R. and the possibility of having organized labor again blight a full flow of production, and profits, by backing up another round of postwar wage increases by strikes.

• Another part of a rational explanation of the stock market break which, in our opinion, has not been enough emphasized, is the recent checking—and even some reversal—of the long decline of rates of interest. Until recently the federal government used its tremendous fiscal and financial powers to hold down the rate of interest on government obligations in order to reduce to a minimum the budgetary burden of the interest load. In so doing, however, it also made a major contribution to monetary inflation by making it easier to borrow in all money markets where the rate of interest paid by the federal government exercises great influence.

Apparently alarmed at last, however, by the great con-

tribution being made to inflation by its low interest-rate policy, the federal government has recently been taking steps to increase interest rates. This move has coincided with a great surge in the demand for bank loans to business which, during July and August, increased by more than \$1 billion. The result has been a decided "firming" of interest rates all along the line.

• Although many people who play the stock market are simply playing a hunch on what is going to happen next to the price of their holdings, a basic economic job of the market is to place a capital value on the earnings, present and future, of enterprises by reference to the present and prospective price at which money can be borrowed for business purposes. When, as has happened in recent months, the price of money has been getting firmer, and in some key cases going up, the economically logical effect is to put a brake on rising security prices. And when that effect is coupled with such possibilities as those of a major assault on profits by organized labor, a logical basis for a stock market reaction is created.

There remains, of course, the question of why the stock market should go into such a severe and dramatic dive when the economic events bearing upon its course took no such spectacular turn. The answer may be found, in part, in the elimination of margin trading which cuts down the potential cushions for a falling market by cutting down the volume of purchasing that might otherwise be possible. There is also, no doubt, some stampede psychology in such a break. The fact remains that the break can be explained by appeal to economic logic.

• Then why does it not follow that these developments forecast a falling off of business activity before long? As we see it, the explanation is that they are developments which impinge with peculiar force upon the stock market, with its key concern for capitalizing profits prospects. Of themselves, they may well not have the force to undermine the tremendous strength of the basic business situation which was detailed in the report on "Business and Prices: The Next Nine Months" in Business Week for Aug. 24.

The stock market has a spotty record as a forecaster of business activity. It called the turn with major breaks in 1919, 1929, and 1937. But it missed it in 1926 and (under the domination of war fears) in 1939 when stock breaks comparable to that just experienced went one way and business activity the other—for sustained periods. There is basis for the belief that the stock market has missed again as a forecaster of business activity in the near future. But, somewhat paradoxically, it does not follow that the break makes no sense. Viewed with reference to the special economic calculus governing the market it may make quite a lot.

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Actual color photograph of 1947 Studebaker Commander Regal De Luxe coupe for 5 passengers

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